

=> d his

(FILE 'HOME' ENTERED AT 13:02:11 ON 02 AUG 2002)

FILE 'REGISTRY' ENTERED AT 13:02:22 ON 02 AUG 2002

L1 STR
 L2 0 S L1
 L3 STR
 L4 22 S L3
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 L6 50 S L5
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 SAVE L7 TEMP QAZ887P/A
 L8 0 S L1 SSS SAM SUB=L7
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 SAVE L17 QAZ887S1/A

FILE 'HCAPLUS' ENTERED AT 13:30:26 ON 02 AUG 2002

FILE 'REGISTRY' ENTERED AT 13:31:07 ON 02 AUG 2002

L18 0 S L17 AND USPATFUL/LC *no patents*
 L19 14 S L17 AND (CAPLUS OR CA)/LC

FILE 'HCAPLUS' ENTERED AT 13:32:01 ON 02 AUG 2002

L20 28 S L17 *28 citations*

FILE 'CAOLD' ENTERED AT 13:33:14 ON 02 AUG 2002

L21 0 S L17 *no citations*

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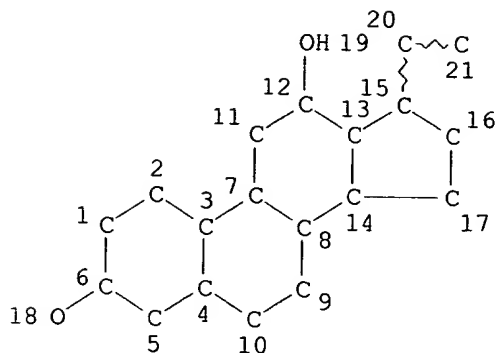
L22 2 S L17 *2 cites*

FILE 'NAPRALERT' ENTERED AT 13:36:18 ON 02 AUG 2002

L23 1 S L17 *1 cite*

=> d que 120
L5

STR



parent str

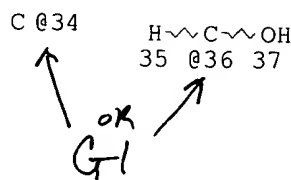
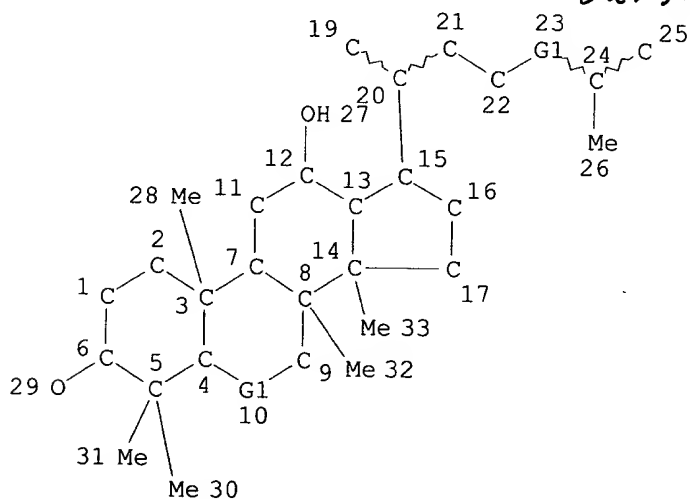
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

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L15 STR

6343 cpds
subset str



VAR G1=34/36

NODE ATTRIBUTES:

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QAZI 09/910,887

CONNECT IS E2 RC AT 34
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GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 36

STEREO ATTRIBUTES: NONE

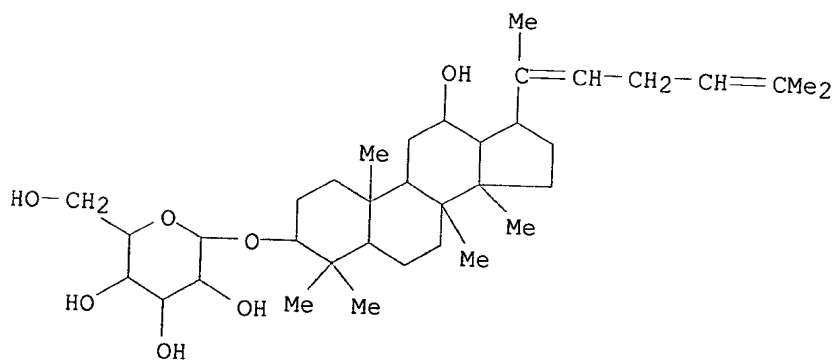
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14 cds

=> d ibib abs hitstr 1-28

L20 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:888934 HCAPLUS
 DOCUMENT NUMBER: 135:371954
 TITLE: Process for preparation of rare-ginsenosides
 INVENTOR(S): Xu, Jingda; Jin, Yongri; Li, Xuwen; Song, Changchun; Cong, Dengli
 PATENT ASSIGNEE(S): Science and Technology Development Co., Basic Medical College, Baiqiu'en Medical Univ., Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CN 1293198	A	20010502	CN 2000-123074	20001010
AB	Ginsenosides were prepd. from the hydrolyzation of ginsenoside monomer or its mixt. with 3-15% KOH or NaOH in high boiling-point alc. (such as glycol, propanediol, 1,3-butanediol, 1,4-butanediol, glycerol, diglycol, or polyethylene glycol with mol. wt. <700), at 180-270.degree., cooled to room temp., dild. with water, then extd. with org. solvent (such as chloroform, Et acetate or butanol), or sepd. with macroporous resin. Thus, 10 g NaOH dissolved in 100 mL glycol, add 10 g ginsenosides, hydrolyzed at 190.degree. for 1 h, cooled to the room temp., added 50 times water, extd. with Et acetate, gave 7 g product, TLC confirmed it contained ginsenoside Rg3, Rh2, Rh1, Rg2, protpanaxadiol, and protpanaxatriol.				
IT	105558-26-7P, Ginsenoside Rh3 RL: SPN (Synthetic preparation); PREP (Preparation) (process for prepn. of rare-ginsenosides)				
RN	105558-26-7 HCAPLUS				
CN	.beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)				



L20 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:887103 HCAPLUS
 DOCUMENT NUMBER: 137:72700
 TITLE: Cancer chemopreventive compounds of red ginseng

AUTHOR(S): produced from Panax ginseng C.A. Meyer
Yun, Taik-Koo; Lee, Yun-Sil; Lee, You Hui; Yun, Hyo
Yung

CORPORATE SOURCE: Laboratory of Experimental Pathology, Korea Cancer
Center Hospital, Seoul, S. Korea

SOURCE: Journal of Ginseng Research (2001), 25(3), 107-111
CODEN: JGREF7; ISSN: 1226-8453

PUBLISHER: Korean Society of Ginseng

DOCUMENT TYPE: Journal

LANGUAGE: English

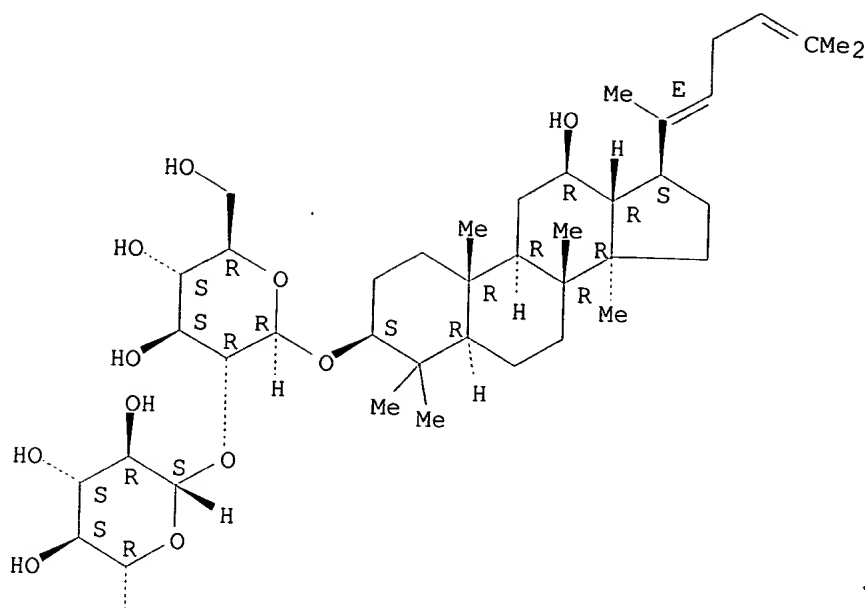
AB Fresh Panax ginseng C.A. cultivated in Korea (Korean red ginseng) was
found to be ineffective as an anticarcinogenic or cancer preventive in
exptl. animal model or in human case-control and cohort study. However,
when treated with heat, the fresh ginseng, white ginseng and red ginseng
were highly effective cancer preventives. Four compds. including
20(S)-ginsenoside Rh1 (Rh1), 20(S)-ginsenoside Rh2 (Rh2),
20(S)-ginsenoside Rg3 (Rg3) and ginsenoside Rg5 were consequently purified
from Korean red ginseng, and they were tested by Yun's 9 wk medium-term
anti-carcinogenicity test model. Rg3 and Rg5 statistically significantly
decreased the incidence of benzo(a)pyrene-induced mouse lung tumor, Rh2
showed tendency of decrease, whereas Rh1 showed no effect. It is,
therefore, concluded that Rg3 and Rg5 are active anticarcinogenic
components in red ginseng and they either singularly or synergistically
act in the prevention of cancer.

IT 186763-78-0, Ginsenoside Rg5
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(cancer chemopreventive compds. of red ginseng produced from Panax
ginseng C.A. Meyer)

RN 186763-78-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-
20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:448497 HCAPLUS

DOCUMENT NUMBER: 135:294045

TITLE: Liquid chromatographic determination of less polar ginsenosides in processed ginseng

AUTHOR(S): Kwon, S. W.; Han, S. B.; Park, I. H.; Kim, J. M.; Park, M. K.; Park, J. H.

CORPORATE SOURCE: College of Pharmacy, Research Institute of Pharmaceutical Science, Seoul National University, Seoul, 151-742, S. Korea

SOURCE: Journal of Chromatography, A (2001), 921(2), 335-339

CODEN: JCRAEY; ISSN: 0021-9673

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

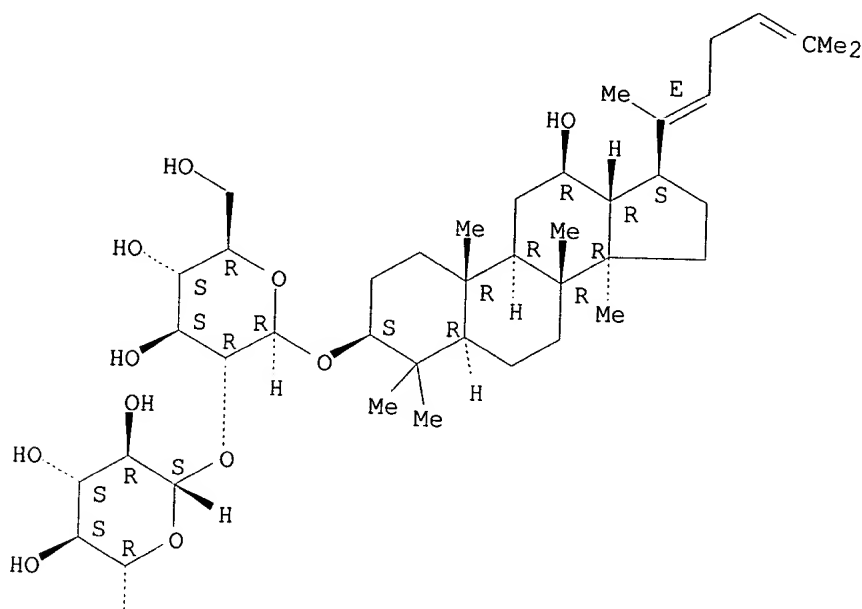
LANGUAGE: English

AB Reversed-phase LC with an evaporative light scattering detector (ELSD) is used for the detn. of less polar ginsenosides in processed ginseng. These ginsenosides include ginsenosides F4, Rg3, Rg5, Rg6, Rk1, Rk3, Rs3, Rs4, and Rs5. The method used a C18-bonded silica column with a CH3CN/H2O/CH3COOH gradient elution. (20R) and (20S) epimers and geometric

isomers at the C-20 position of ginsenosides, which are not generally
sepd. by amino columns, were now clearly sepd.
IT 186763-78-0, Ginsenoside Rg5 195711-64-9, Ginsenoside
Rs4 364779-14-6 364779-16-8
RL: ANT (Analyte); ANST (Analytical study)
(liq. chromatog. detn. of less polar ginsenosides in processed ginseng)
RN 186763-78-0 HCAPLUS
CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-
20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A

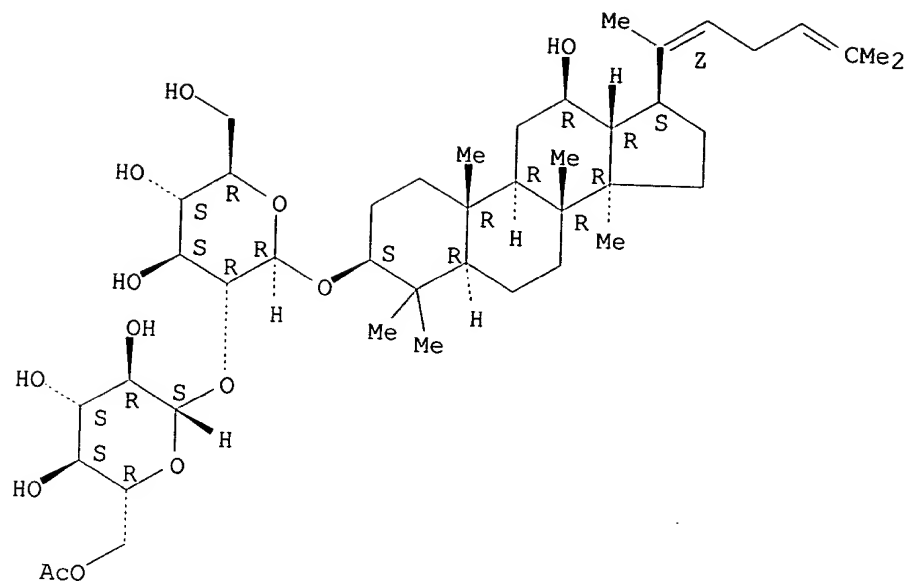


PAGE 2-A



RN 195711-64-9 HCAPLUS
CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-
20(22),24-dien-3-yl 2-O-(6-O-acetyl-.beta.-D-glucopyranosyl)- (9CI) (CA
INDEX NAME)

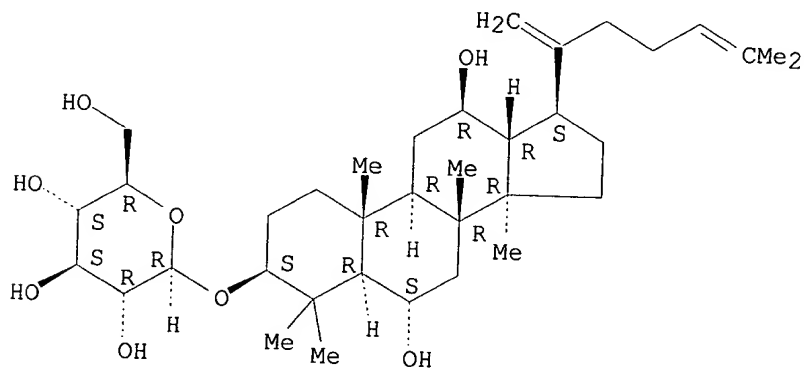
Absolute stereochemistry.
Double bond geometry as shown.



RN 364779-14-6 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,6.alpha.,12.beta.)-6,12-dihydroxydammar-20,24-dien-3-yl (9CI) (CA INDEX NAME)

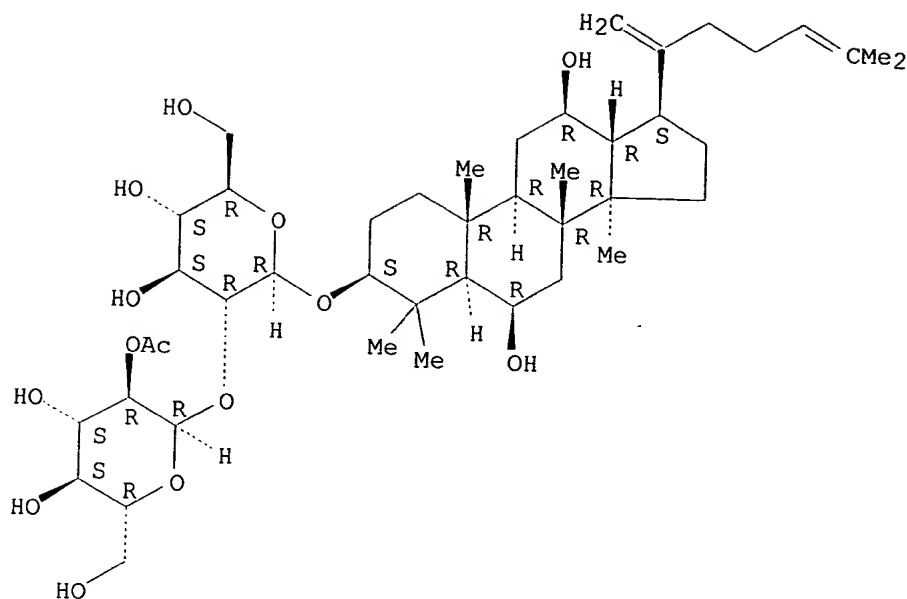
Absolute stereochemistry.



RN 364779-16-8 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,6.alpha.,12.beta.)-6,12-dihydroxydammar-20,24-dien-3-yl 2-O-(2-O-acetyl-.alpha.-D-glucopyranosyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

10

THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:149688 HCAPLUS

DOCUMENT NUMBER: 134:205077

TITLE: NMR signal complete assignments of three protopanaxodiol monodesmosides from Panax notoginseng

AUTHOR(S): Teng, Rong-wei; Li, Hai-zhou; Wang, De-zu; He, Yi-neng; Yang, Chong-ren

CORPORATE SOURCE: Kunming Institute of Botany, The Chinese Academy of Sciences, Kunming, 650204, Peop. Rep. China

SOURCE: Bopuxue Zazhi (2000), 17(6), 461-468

CODEN: BOZAE2; ISSN: 1000-4556

PUBLISHER: Zhongguo Kexueyuan Wuhan Wuli Yanjiuso

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Three protopanaxodiol monodesmosides isolated from mild acid hydrolysis products of root saponins of Panax notoginseng were identified as ginsenoside-Rg5, 20(R)-ginsenoside-Rg3 and 20(S)-ginsenoside-Rg3. The complete assignments of ¹H and ¹³C NMR chem. shifts of these glycosides were obtained by means of 2D NMR techniques, such as 1H-1H COSY, TOCSY, ROESY, HMBC as well as HMQC. The differences of chem. shifts of 20(R)- and 20(S)-isomer were discussed.

IT 186763-78-0P, Ginsenoside Rg5

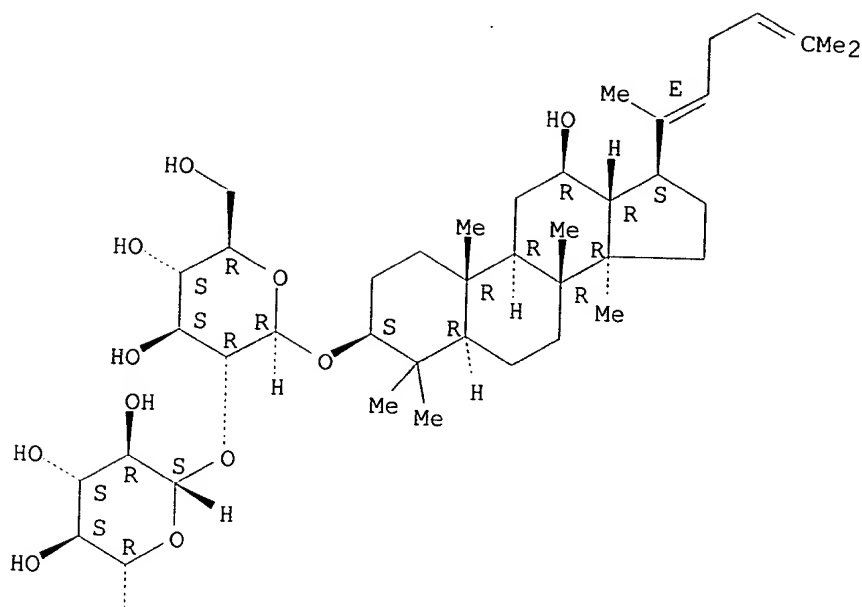
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation) (NMR signal complete assignments of protopanaxodiol monodesmosides from Panax notoginseng)

RN 186763-78-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

Double bond geometry as shown.



L20 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2000:746388 HCAPLUS
 DOCUMENT NUMBER: 134:61327
 TITLE: Steaming of Ginseng at High Temperature Enhances Biological Activity
 AUTHOR(S): Kim, Wang Yu; Kim, Jong Moon; Han, Sang Beom; Lee, Seung Ki; Kim, Nak Doo; Park, Man Ki; Kim, Chong Kook; Park, Jeong Hill
 CORPORATE SOURCE: Research Institute of Pharmaceutical Sciences College of Pharmacy, Seoul National University, Seoul, 151-742, S. Korea
 SOURCE: Journal of Natural Products (2000), 63(12), 1702-1704
 CODEN: JNPRDF; ISSN: 0163-3864
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The present study was performed to evaluate the effect of steaming ginseng at a temp. over 100 .degree.C on its chem. constituents and biol. activities. Raw ginseng was steamed at 100, 110, and 120 .degree.C for 2 h using an autoclave. The ginseng steamed at 120 .degree.C was more potent in its ability to induce endothelium-dependent relaxation. Steaming the raw ginseng at 120 .degree.C also remarkably increased the radical-scavenging activity. Ginsenosides F4, Rg3, and Rg5, which were

not present in raw ginseng, were produced after steaming. Ginsenosides Rg3 and Rg5 were the most abundant ginsenosides in the ginseng steamed at 120 .degree.C, accounting for 39% and 19% of all ginsenosides, resp.

IT 186763-78-0, Ginsenoside Rg5

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)

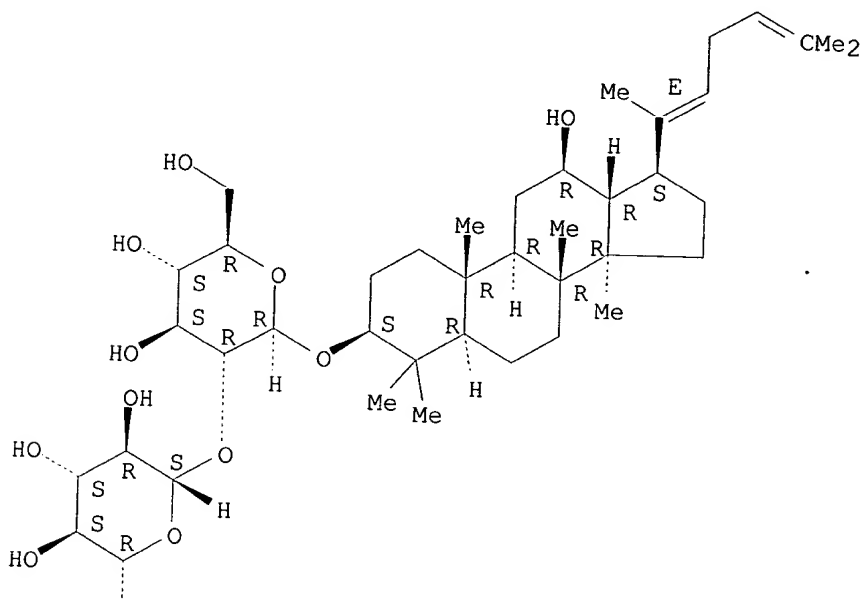
(steaming of Ginseng at high temp. enhances biol. activity)

RN 186763-78-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

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PAGE 2-A



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2002 ACS

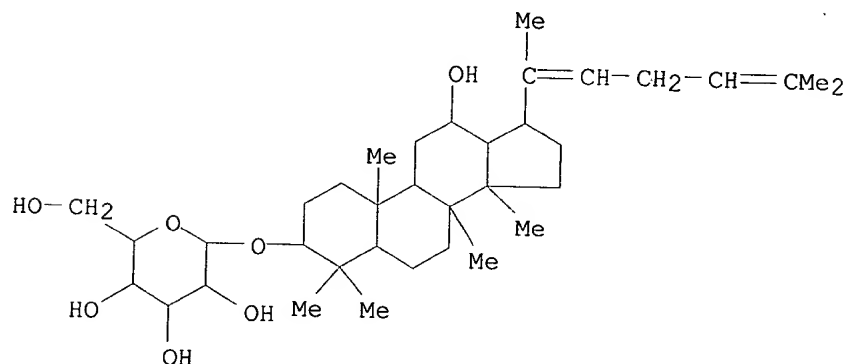
ACCESSION NUMBER: 2000:168451 HCAPLUS

DOCUMENT NUMBER: 133:147472

TITLE: Isolation and identification of 20(S)-ginsenoside-Rh1, -Rh2 and ginsenoside-Rh3 from leaves of Panax

Searched by Susan Hanley 305-4053

AUTHOR(S): *quinquefolium*
 CORPORATE SOURCE: Cong, Dengli; Song, Changchun; Xu, Jingda
 SOURCE: Norman Bethune University of Medical Sciences,
 Changchun, 130021, Peop. Rep. China
 PUBLISHER: Zhongguo Yaoxue Zazhi (Beijing) (2000), 35(2), 82-84
 DOCUMENT TYPE: CODEN: ZYZAEU; ISSN: 1001-2494
 LANGUAGE: Zhongguo Yaoxuehui
 Journal
 Chinese
 AB 20(S)-Ginsenoside-Rh1, -Rh2 and ginsenoside-Rh3 were isolated from the
 leaves of *Panax quinquefolium* L. and identified. The 3 compds. were extd.
 by water and absorbed by Macro-reticular resins, then eluted with EtOH and
 isolated by silica gel column chromatog.; the compds. were identified by
 means of phys. and chem. properties, IR, NMR, etc. Ginsenoside-Rh3 was
 isolated for the first time from the leaves of *Panax quinquefolium* L.
 IT 105558-26-7, Ginsenoside-Rh3
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (of *Panax quinquefolium* leaves)
 RN 105558-26-7 HCAPLUS
 CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-
 20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



L20 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1999:245924 HCAPLUS
 DOCUMENT NUMBER: 131:97063
 TITLE: Ginsenoside-Rs4, a new type of ginseng saponin
 concurrently induces apoptosis and selectively
 elevates protein levels of p53 and p21WAF1 in human
 hepatoma SK-HEP-1 cells
 AUTHOR(S): Kim, S. E.; Lee, Y. H.; Park, J. H.; Lee, S. K.
 CORPORATE SOURCE: College of Pharmacy, Seoul National University, Seoul,
 151-742, S. Korea
 SOURCE: European Journal of Cancer (1999), 35(3), 507-511
 CODEN: EJCAEL; ISSN: 0959-8049
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB In this paper, the authors present evidence that ginsenoside-Rs4 (G-Rs4;
 an acetylated analog of ginsenoside-Rg5), a new ginseng saponin isolated
 from *Panax ginseng* C. A. Meyer, elevates protein levels of p53 and
 p21WAF1, which are assocd. with the induction of apoptosis in SK-HEP-1

cells. Flow cytometric analyses showed that G-Rs4 initially arrested the cell cycle at the G1/S boundary, but consequently induced apoptosis as evidenced by generating an apoptotic peak. The induction of apoptosis was confirmed by the results of DNA fragmentation assays and alterations in cell morphol. after treatment of the cells with G-Rs4. Immunoblot assays showed that G-Rs4 significantly elevated protein levels of p53 and p21WAF1, concurrently with the downregulation of both cyclins E- and A-dependent kinase activities and induction of apoptosis. The authors suggest that G-Rs4 induces apoptosis, the effect of which is closely related to the downregulation of both cyclins E- and A-dependent kinase activity as a consequence of selectively elevating protein levels of p53 and p21WAF1 in SK-HEP-1 cells.

IT 195711-64-9, Ginsenoside Rs4

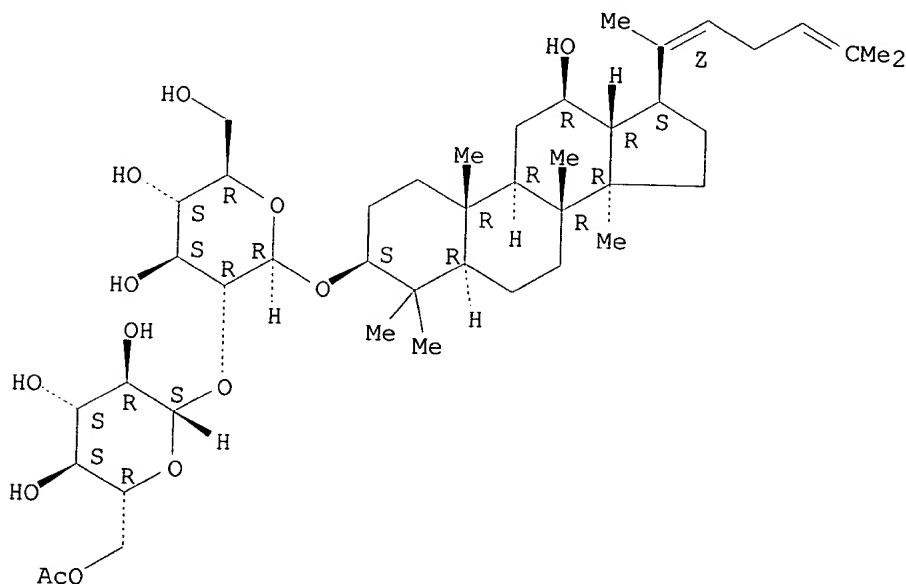
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ginsenoside-Rs4 concurrently induces apoptosis and selectively elevates protein levels of p53 and p21WAF1 in human hepatoma SK-HEP-1 cells)

RN 195711-64-9 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-(6-O-acetyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT:

22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:168726 HCAPLUS

DOCUMENT NUMBER: 131:13808

TITLE:

AUTHOR(S): Non-ginsenoside nicotinic activity in ginseng species
Lewis, Rhiannon; Wake, George; Court, Gudrun; Court,
Jenny A.; Pickering, Anne T.; Kim, Young C.; Perry,

CORPORATE SOURCE: Elaine K.
 Medical Research Council Neurochemical Pathology Unit,
 Newcastle General Hospital, Newcastle-upon-Tyne, NE4
 6BE, UK
 SOURCE: Phytotherapy Research (1999), 13(1), 59-64
 CODEN: PHYREH; ISSN: 0951-418X
 PUBLISHER: John Wiley & Sons Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Amongst the many different therapeutic applications of ginseng are beneficial effects on age-related cognitive impairments. Aging in the brain is assocd. with a loss of nicotinic receptor binding and receptor stimulation increases binding. Stimulation of the CNS (central nervous system) nicotinic receptor is considered to be beneficial in relation to symptomatic treatment and neuroprotection in age-assocd. cognitive disorders which involve a further receptor loss. The authors assessed Panax ginseng, Panax quinquefolium and several chem. constituents of these plants for nicotinic activity based on displacement of 3H-(-)nicotine from human brain cerebral cortex membranes in vitro. Dose-dependent displacement was evident in crude ethanol exts. of Panax ginseng and Panax quinquefolium. Assay of an ext. of Panax ginseng showed the plant to have affinity for both the nicotinic receptor, and to a lesser extent the muscarinic receptor (IC50 2.12 mg/mL and 5.25 mg/mL resp.). Activity was largely conserved after the extn. of choline and other water sol. quaternary ammonium compds. (QAC), indicating that the activity of the plant exts. was not due to choline. Displacement binding assay of some purified chem. constituents, including a no. of ginsenosides, showed that these were not primarily responsible for Panax activity. The active chem. constituent has yet to be identified, but the demonstrated nicotinic activity of ginseng warrants further investigation with ref. to therapeutic activity in age-related conditions such as dementia.

IT 186763-78-0, Ginsenoside Rg5
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

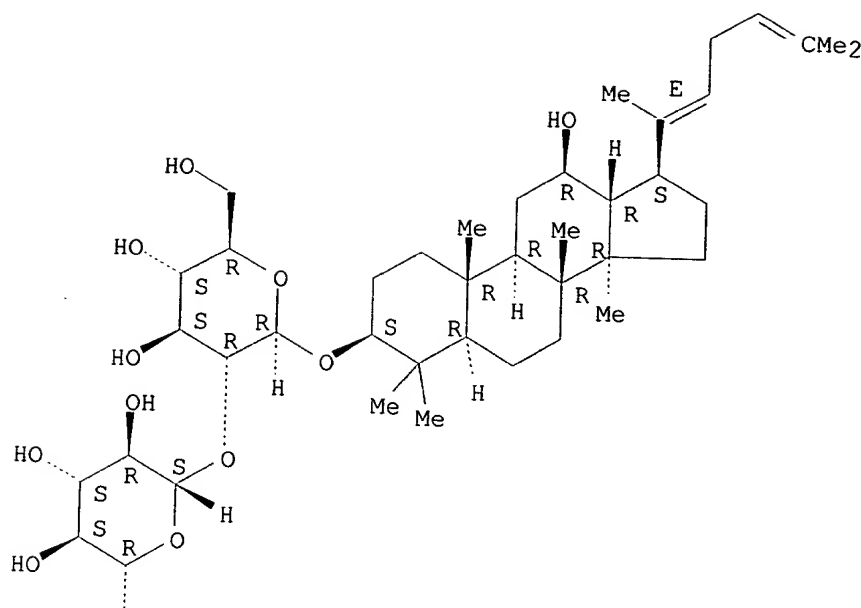
(ginseng constituents nicotinic activity in human cerebral cortex in vitro in relation to therapeutic effects in age-related cognitive impairments)

RN 186763-78-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:628673 HCAPLUS

DOCUMENT NUMBER: 129:298325

TITLE: Ginsenosides Rb1 and Rg3 protect cultured rat cortical cells from glutamate-induced neurodegeneration.

AUTHOR(S): [Erratum to document cited in CA129:225620]
Kim, Young C.; Kim, So R.; Markelonis, George J.; Oh, Tae H.

CORPORATE SOURCE: College of Pharmacy, Seoul National University, Séoul, S. Korea

SOURCE: Journal of Neuroscience Research (1998), 54(1), 123

PUBLISHER: CODEN: JNREDK; ISSN: 0360-4012

DOCUMENT TYPE: Wiley-Liss, Inc.

LANGUAGE: Journal

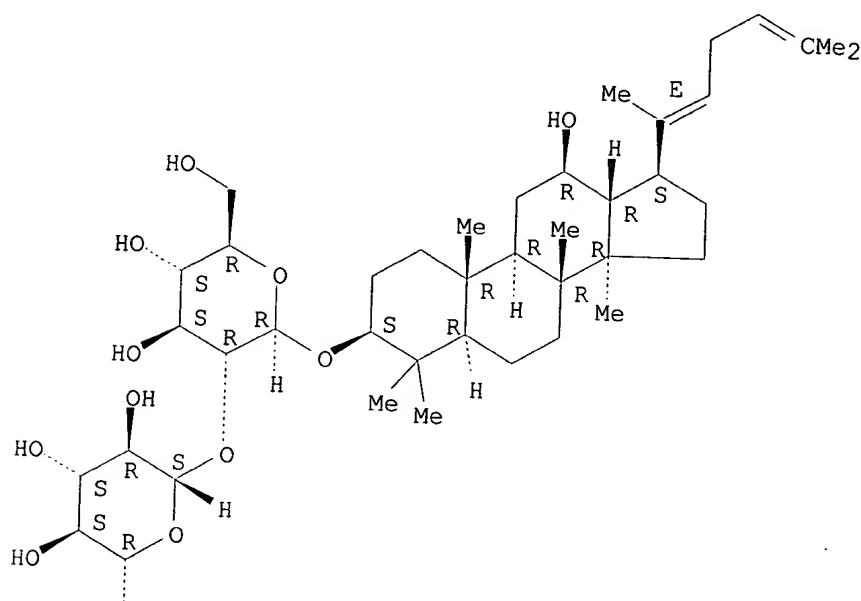
English

AB On page 427, under the heading Assessment of Neurotoxicity in the Materials and Methods section, the formula given for the assessment of percentage cell viability was incorrect. The formula is correctly stated in a footnote to Table I on page 429. The correct formula is as follows: 100 .times. (OD of glutamate + ginsenoside-treated - OD of

glutamate-treated)/(OD of control - OD of glutamate-treated).
 IT 186763-78-0, Ginsenoside Rg5
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (ginsenosides Rb1 and Rg3 protect cultured rat cortical cells from
 glutamate-induced neurodegeneration (Erratum))
 RN 186763-78-0 HCAPLUS
 CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-
 20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.

PAGE 1-A



PAGE 2-A



L20 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1998:503283 HCAPLUS
 DOCUMENT NUMBER: 129:225620
 TITLE: Ginsenosides Rb1 and Rg3 protect cultured rat cortical
 cells from glutamate-induced neurodegeneration
 AUTHOR(S): Kim, Young C.; Kim, So R.; Markelonis, George J.; Oh,
 Tae H.
 CORPORATE SOURCE: College of Pharmacy, Seoul National University, Seoul,
 S. Korea
 SOURCE: Journal of Neuroscience Research (1998), 53(4),
 426-432

PUBLISHER: CODEN: JNREDK; ISSN: 0360-4012
DOCUMENT TYPE: Wiley-Liss, Inc.
LANGUAGE: Journal
English

AB Certain natural products and Asian herbal remedies have been used in Asia to attenuate neurodegenerative diseases, including senile dementia. We have examd. derivs. of several natural products for potential neuroprotective activity in an in vitro test system. In the present study, we assayed a no. of compds. that were isolated from Panzax ginseng C.A. Meyer (Araliaceae) for an ability to protect rat cortical cell cultures from the deleterious effects of the neurotoxicant, glutamate. We found that ginsenosides Rb1 and Rg3 significantly attenuated glutamate-induced neurotoxicity. Brief exposure of cultures to excess glutamate caused extensive neuronal death. Glutamate-induced neuronal cell damage was reduced significantly by pretreatment with Rb1 and Rg3. Ginsenosides Rb1 and Rg3 inhibited the overprodn. of nitric oxide, which routinely follows glutamate neurotoxicity, and preserved the level of superoxide dismutase in glutamate-treated cells. Furthermore, in cultures treated with glutamate, these ginsenosides inhibited the formation of malondialdehyde, a compd. that is produced during lipid peroxidn., and diminished the influx of calcium. These results show that ginsenosides Rb1, and Rg3 exerted significant neuroprotective effects on cultured cortical cells. Therefore, these compds. may be efficacious in protecting neurons from oxidative damage that is produced by exposure to excess glutamate.

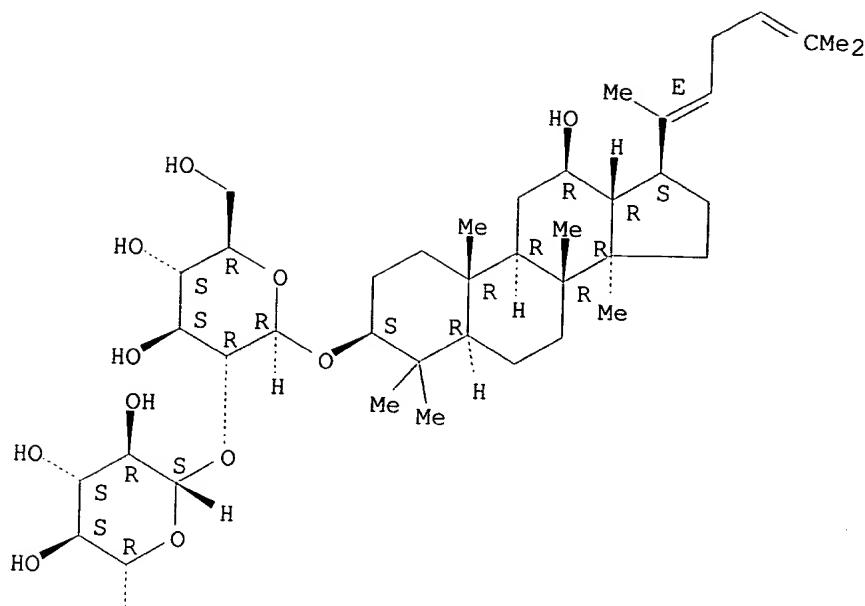
IT 186763-78-0, Ginsenoside Rg5

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ginsenosides Rb1 and Rg3 protect cultured rat cortical cells from glutamate-induced neurodegeneration)

RN 186763-78-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



L20 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:331287 HCAPLUS

DOCUMENT NUMBER: 129:76131

TITLE: Ginsenoside Rh2 and Rh3 induce differentiation of HL-60 cells into granulocytes: modulation of protein kinase C isoforms during differentiation by ginsenoside Rh2

AUTHOR(S): Kim, Young Sook; Kim, Dong Seon; Kim, Shin Il
CORPORATE SOURCE: Korea Ginseng and Tobacco Research Institute, Taejon, 305-345, S. Korea

SOURCE: International Journal of Biochemistry & Cell Biology (1998), 30(3), 327-338

CODEN: IJBBFU; ISSN: 1357-2725

PUBLISHER: Elsevier Science Ltd.

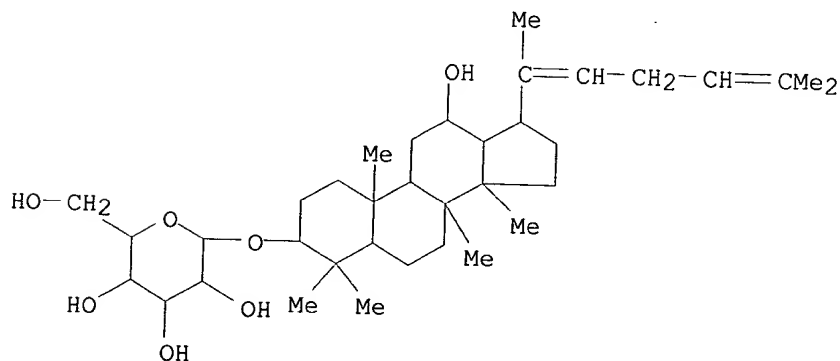
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ginsenoside Rh1 or Rh2 differentiated B16 melanoma or F9 teratocarcinoma to phenotypic normal melanocyte-like cells or parietal endoderm-like cells. Ginsenoside Rh3 and Rh4 were recently isolated from Panax ginseng, but their biochem. and pharmacol. effects remain unidentified. The present study investigated whether the ginsenoside Rh group (G-Rh1, -Rh2, -Rh3 and -Rh4) having similar structures induce differentiation of HL-60

cells and whether protein kinase C (PKC) is involved in differentiation by ginsenoside. Differentiation was assessed by Wright-Giemsa stain and nitroblue tetrazolium redn. G-Rh2 and G-Rh3 induced differentiation of HL-60 cells into morphol. and functionally granulocytes but G-Rh1 and G-Rh4 did not. G-Rh2 and G-Rh3 arrested the cell cycle at the G1/S phase, consistent with the ability to induce differentiation in a decreasing order of retinoic acid > G-Rh2 > G-Rh3. During differentiation by G-Rh2, Ca²⁺/phospholipid-dependent PKC activity was increased in both the cytosol and total cell ext. and Ca²⁺/phospholipid-dependent phosphorylation of 38 and 200 kDa endogenous proteins increased, while phosphorylation of 60, 64, 66 and 97 kDa proteins was Ca²⁺/phospholipid-independent. When cytosolic PKC isoforms were analyzed by immunoblotting, no significant change was obsd. in the .alpha. level, however, the immunoreactive 60 kDa band of a similar mass to the PKC catalytic fragment appeared following treatment with G-Rh2. The .beta. isoform was gradually increased with prolonged treatment. The .gamma. isoform was not detected in the cytosol of untreated cells, whereas a small amt. was detected 5 days after treatment. It is concluded that G-Rh2 and G-Rh3 can induce differentiation of HL-60 cells into granulocytes and modulation of PKC isoform levels may contribute to differentiation of HL-60 cells by G-Rh2.

IT 105558-26-7, Ginsenoside Rh3
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (ginsenosides induce differentiation of HL-60 cells into granulocytes via modulation of protein kinase C isoforms)
 RN 105558-26-7 HCAPLUS
 CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



L20 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1998:75573 HCAPLUS
 DOCUMENT NUMBER: 128:213344
 TITLE: Platelet activating factor antagonist activity of ginsenosides
 AUTHOR(S): Jung, Keun Young; Kim, Dong Seon; Oh, Sei Ryang; Lee, Im Seon; Lee, Jung Joon; Park, Jong Dae; Kim, Shin, II; Lee, Hyeong-Kyu
 CORPORATE SOURCE: Natural Product Biosynthesis Research Unit, Korea Research Institute of Bioscience and Biotechnology, Taejon, 305-600, S. Korea
 SOURCE: Biological & Pharmaceutical Bulletin (1998), 21(1), 79-80

PUBLISHER: CODEN: BPBLEO; ISSN: 0918-6158
 DOCUMENT TYPE: Pharmaceutical Society of Japan
 LANGUAGE: Journal
 English

AB Ginseng saponins and their degradn. products have been screened for antagonist activity towards [3H]PAF (platelet activating factor) in washed rabbit platelet receptor binding studies. 20(S)- and .DELTA.20-ginsenosides Rg3, protopanaxadiol-type saponins, were relatively potent PAF antagonists (IC50=4.9.times.10-5M and 9.2.times.10-5M, resp.).

IT 74964-14-0

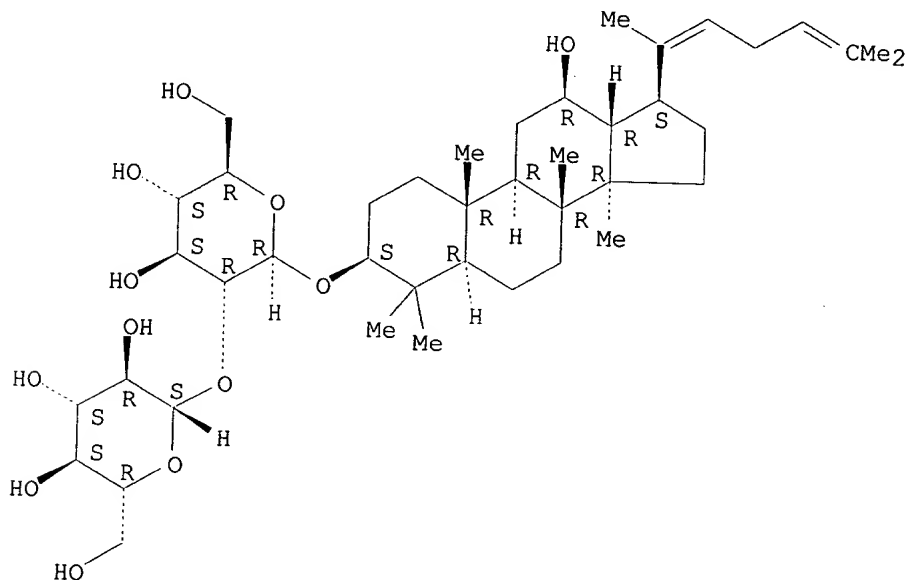
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(platelet activating factor receptor antagonist activity of ginsenosides)

RN 74964-14-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



L20 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:617930 HCAPLUS

DOCUMENT NUMBER: 127:248361

TITLE: Preparation of ginseng saponin oligosaccharides as antitumors

INVENTOR(S): Park, Man Ki; Lee, Seung Ki; Park, Jeong Hill; Kim, Jong Moon; Lee, Kwang Youl; Han, Sang Beom

PATENT ASSIGNEE(S): Cheil Je Dang Co., S. Korea; Park, Man Ki; Lee, Seung Ki; Park, Jeong Hill; Kim, Jong Moon; Lee, Kwang Youl; Han, Sang Beom

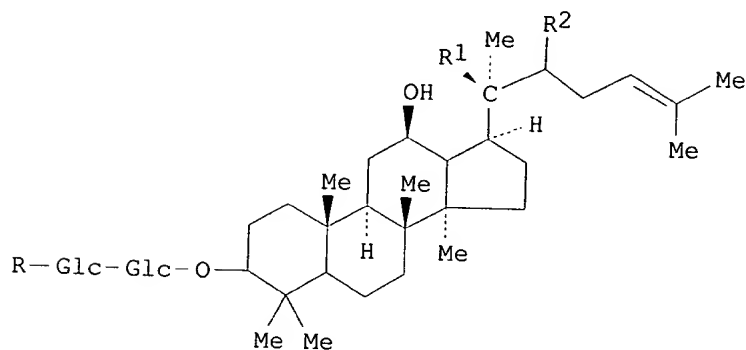
SOURCE: PCT Int. Appl., 24 pp.

DOCUMENT TYPE: CODEN: PIXXD2
 Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9731933	A1	19970904	WO 1996-KR123	19960729
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9665334	A1	19970916	AU 1996-65334	19960729
PRIORITY APPLN. INFO.:			KR 1996-4879	19960227
			WO 1996-KR123	19960729

GI



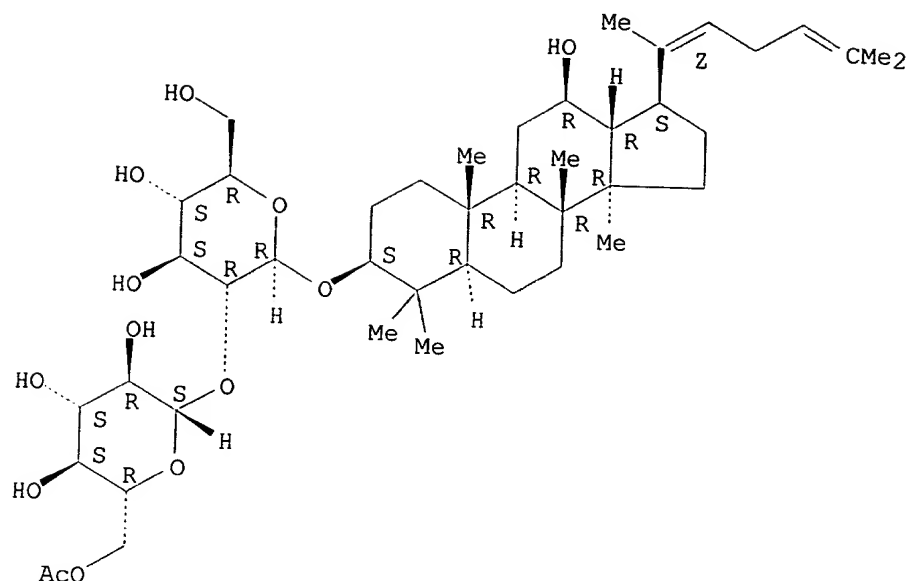
AB Title ginseng saponin oligosaccharides I (R = Ac, R1= OH, R2 = H; R = Ac, R1R2 = bond) were prepd. by acetylation of I (R = H, R1= OH, R2 = H; R = H, R1R2 = bond) with acetyl chloride in presence of 2,4,6-collidine under reduce pressure. I (R = Ac, R1= OH, R2 = H; R = Ac, R1R2 = bond) were tested for their antitumor activity and significantly inhibit the growth of hepatoma sk-Hep-1 cells (concn. of I = 0.01-10 .mu.M).

IT 195711-64-9p
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of ginseng saponin oligosaccharides as antitumors)

RN 195711-64-9 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-(6-O-acetyl-.beta.-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



IT 74964-14-0

RL: RCT (Reactant); RACT (Reactant or reagent)

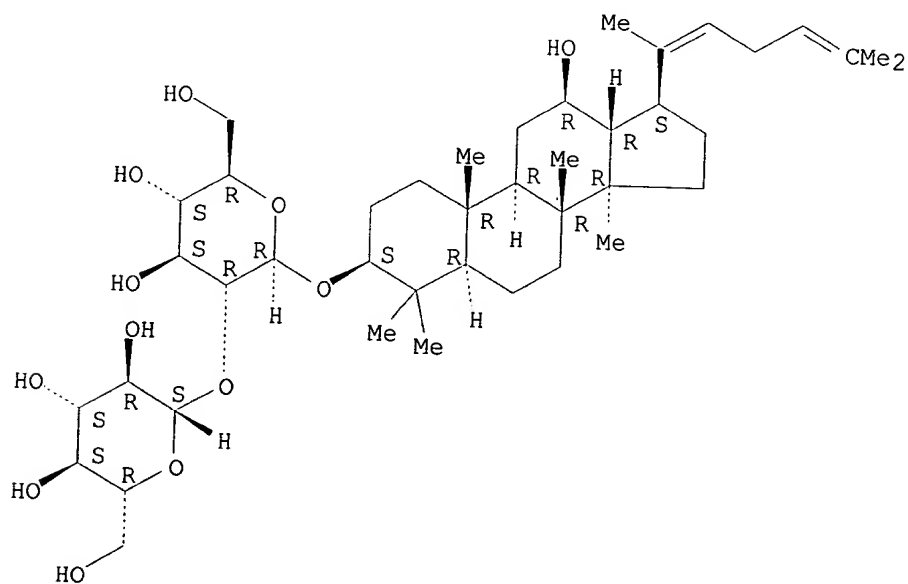
(prepn. of ginseng saponin oligosaccharides as antitumors)

RN 74964-14-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



L20 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:307396 HCAPLUS

DOCUMENT NUMBER: 126:325076

TITLE: Ginsenoside-Rg5 suppresses cyclin E-dependent protein kinase activity via up-regulating p21Cip/WAF1 and down-regulating cyclin E in SK-HEP-1 cells

AUTHOR(S): Lee, Kwang Youl; Lee, You Hui; Kim, Shin Il; Park, Jeong Hill; Lee, Seung Ki

CORPORATE SOURCE: College of Pharmacy, Seoul National University, Seoul, 151-742, S. Korea

SOURCE: Anticancer Research (1997), 17(2A), 1067-1072

CODEN: ANTRD4; ISSN: 0250-7005

PUBLISHER: Anticancer Research

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the present study, we report that ginsenoside-Rg5 (G-Rg5), a newly discovered diol-contg. ginsenoside, blocks the cell cycle of human hepatoma SK-HEP-1 cells via the down-regulation of cyclin E-dependent kinase activity. The results from flow cytometric analyses show that G-Rg5 arrests the cell cycle of SK-HEP-1 cells at the G1/S transition phase. The cyclin E-dependent kinase activity that has been immunopptd. with cyclin E-specific antibody is down-regulated in response to G-Rg5. The results from immunoblottings show that the down-regulation of cyclin E-dependent kinase activity is related to increased protein levels of p21Cip/WAF1 and to decreased protein levels of cyclin E, CDK2, and CDC25A. Collectively, these data suggest that G-Rg5 blocks cell cycle of SK-HEP-1 cells at the G1/S transition phase by down-regulating cyclin E-dependent kinase activity and that the down-regulation of cyclin E-dependent kinase activity is caused mainly by induced CDK2 inhibitor, p21Cip/WAF1 and decreased levels of cyclin E.

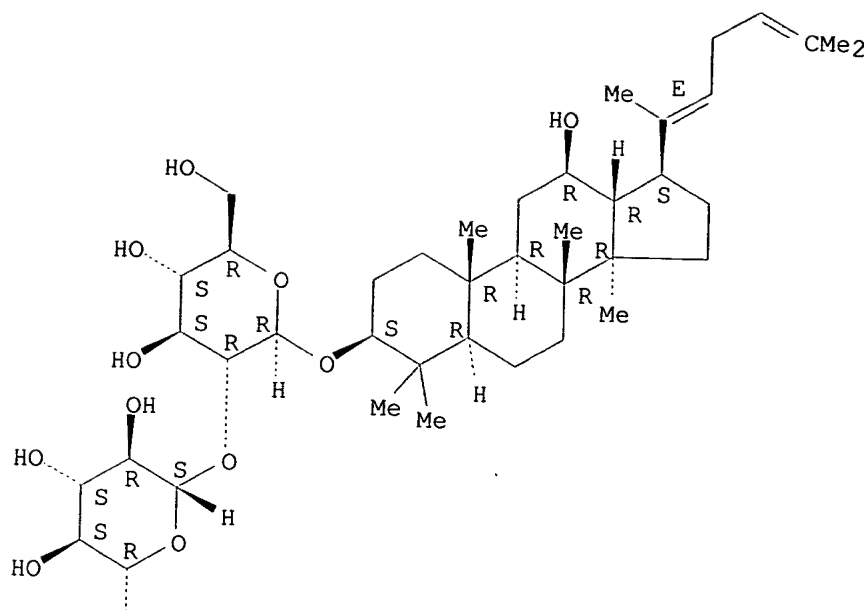
IT 186763-78-0, Ginsenoside-Rg5
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ginsenoside-Rg5 suppresses cyclin E-dependent protein kinase activity via up-regulating p21Cip/WAF1 and down-regulating cyclin E in SK-HEP-1 cells)

RN 186763-78-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.



HO

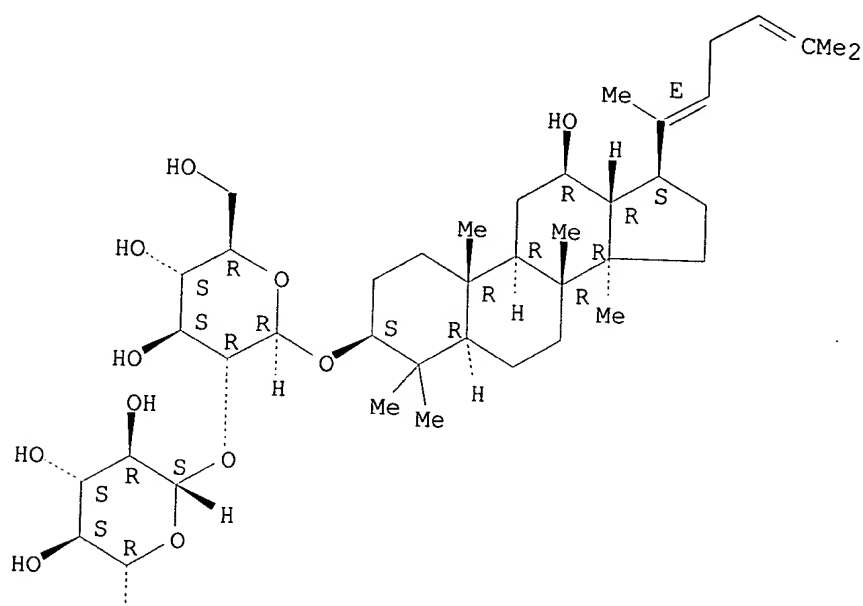
L20 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1997:63985 HCAPLUS
 DOCUMENT NUMBER: 126:142031
 TITLE: Ginsenoside Rg5, a genuine dammarane glycoside from Korean red ginseng
 AUTHOR(S): Kim, Shin Ii; Park, Jeong Hill; Ryu, Jae-Ha; Park, Jong Dae; Lee, You Hui; Park, Jae-Hyun; Kim, Tae-Hee; Kim, Jong Moon; Baek, Nam-In
 CORPORATE SOURCE: Korea Ginseng and Tobacco Research Institute, Taejeon, 305-345, S. Korea
 SOURCE: Archives of Pharmacal Research (1996), 19(6), 551-553
 PUBLISHER: CODEN: APHRDQ; ISSN: 0253-6269
 DOCUMENT TYPE: Pharmaceutical Society of Korea
 LANGUAGE: English
 AB A genuine dammarane glycoside, named ginsenoside Rg5, has been isolated by repeated column chromatog. and preparative HPLC from the MeOH ext. of Korean red ginseng (*Panax ginseng* C.A. Meyer). The chem. structure of ginsenoside Rg5 was detd. as 3-O-[.beta.-D-glucopyranosyl (1.fwdarw.2)-.beta.-D-glucopyranosyl] dammar-20(22),24-diene-3.beta.,12.beta.-diol by spectral and chem. methods. The stereostructure of a double bond at C-20(22) of ginsenoside Rg5 was characterized as (E)

from the chem. shift of C-21 in the ^{13}C -NMR and a NOESY expt. in the ^1H -NMR.

IT **186763-78-0P**, Ginsenoside Rg5
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (Ginsenoside Rg5, a genuine dammarane glycoside from Korean red ginseng)
 RN 186763-78-0 HCAPLUS
 CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.

PAGE 1-A



PAGE 2-A



IT **186752-35-2P**, Ginsenoside Rg5 heptaacetate
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and properties of)
 RN 186752-35-2 HCAPLUS
 CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-glucopyranosyl)-, 3,4,6-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$\text{AcO}-$

L20 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:41808 HCAPLUS
DOCUMENT NUMBER: 126:79904
TITLE: Anticancer sapogenin extraction from ginseng and
pharmaceutical compositions containing the sapogenin
INVENTOR(S): Hasegawa, Hideo; Sei, Shokan; Matsumya, Tomoyuki;
Uchama, Masamori
PATENT ASSIGNEE(S): Hatsupii Waarudo Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08291194	A2	19961105	JP 1995-115321	19950418
AB Extn. of anticancer sapogenins, quasipanaxadiol and quasipanaxatriol, from ginseng and pharmaceutical compns. contg. the sapogenin are claimed. Tablets were formulated contg. quasipanaxadiol 30 mg and lactose, cryst.				

cellulose and magnesium stearate (200 mg/tablet). Both sapogenins inhibited the growth of leukemia cell P388 in cultures.

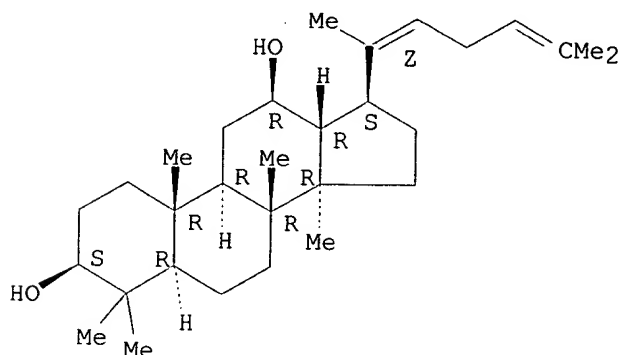
IT 166241-40-3P, Quasipanaxadiol 171903-78-9P,
Quasipanaxatriol

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(anticancer sapogenin extn. from ginseng and pharmaceutical comps. contg. the sapogenin)

RN 166241-40-3 HCAPLUS

CN Dammara-20(22),24-diene-3,12-diol, (3.beta.,12.beta.,20Z)- (9CI) (CA INDEX NAME)

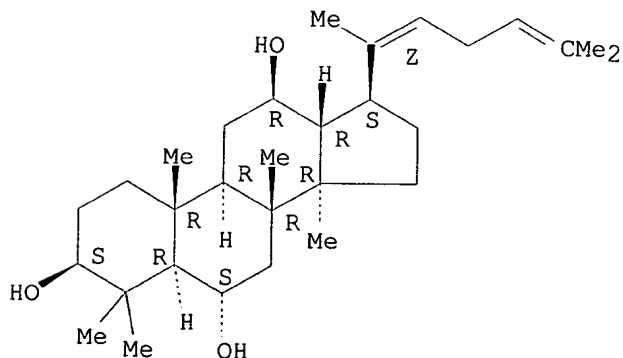
Absolute stereochemistry.
Double bond geometry as shown.



RN 171903-78-9 HCAPLUS

CN Dammara-20(22),24-diene-3,6,12-triol, (3.beta.,6.alpha.,12.beta.,20Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



L20 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:431012 HCAPLUS

DOCUMENT NUMBER: 125:157877

TITLE: Effects of ginseng saponin on modulation of multidrug resistance

AUTHOR(S): Park, Jong-Dae; Kim, Dong-Sun; Kwon, Hyeok-Young; Son,

CORPORATE SOURCE: Sang-Kwon; Lee, You-Hui; Baek, Nam-In; Kim, Shin-Il;
Rhee, Dong-Kwon
Korea Ginseng & Tobacco Research Institute, Taejon,
305-345, S. Korea
SOURCE: Archives of Pharmacal Research (1996), 19(3), 213-218
CODEN: APHRDQ; ISSN: 0253-6269
PUBLISHER: Pharmaceutical Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Multidrug resistance (MDR) has been a major problem in cancer chemotherapy. To overcome this problem, the authors prepd. minor ginsenosides stereoselectively from ginseng saponins and searched for a ginseng component which is effective for inhibition of MDR. MDR inhibition activity was detd. by measuring cytotoxicity to MDR cells using multidrug resistant human fibrocarcinoma KB V20C, which is resistant to 20 nM vincristine and expresses high level of mdrl gene. Of several ginseng components, 20(S)-ginsenoside Rg3, a red ginseng saponin, was found to have the most potent inhibitory activity on MDR and it's concn. capable of inhibiting 50% growth was 82 .mu.M.

IT 74964-14-0P, Ginsenoside Rg31

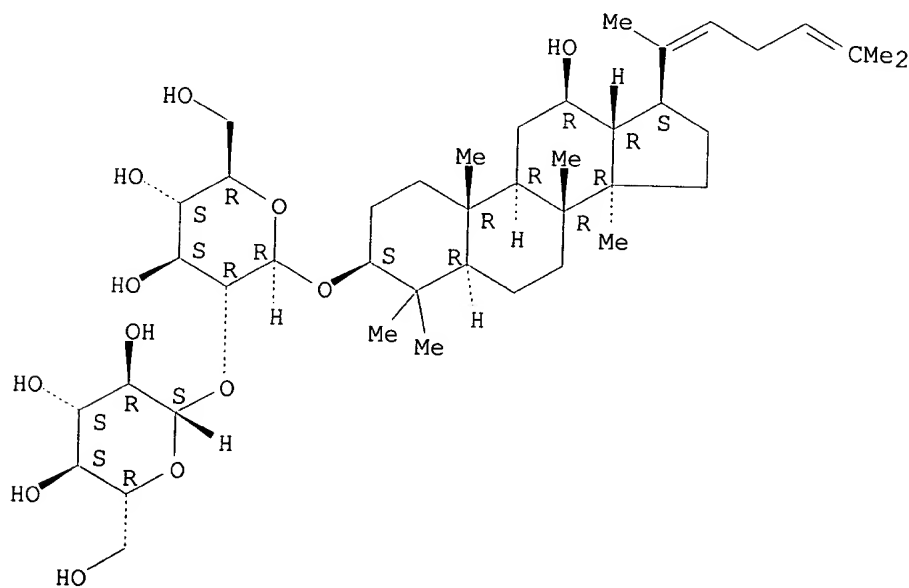
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(effects of ginseng saponins on modulation of multidrug resistance in human cancer cells cytotoxicity to vincristine)

RN 74964-14-0 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



IT 105558-26-7, Ginsenoside Rh3 166241-39-0,

Quasiprotopanxadiol 174688-80-3, Quasiprotopanaxatriol

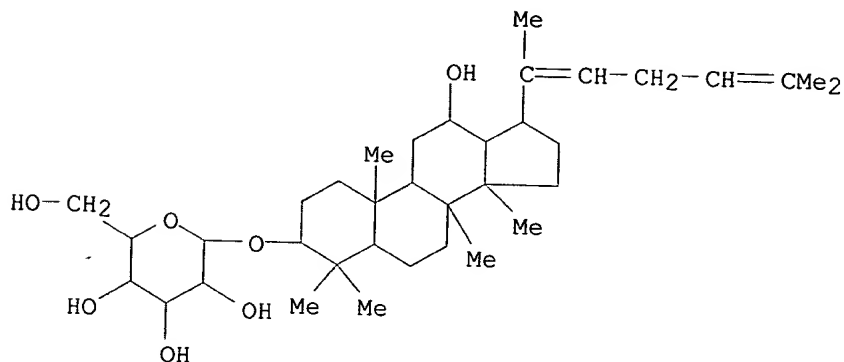
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)

(effects of ginseng saponins on modulation of multidrug resistance in human cancer cells cytotoxicity to vincristine)

RN 105558-26-7 HCAPLUS

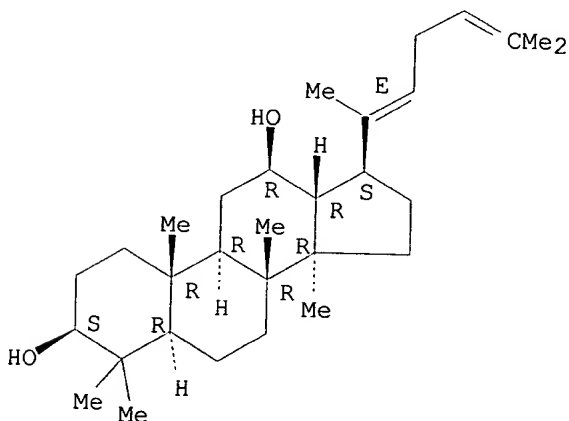
CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammara-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



RN 166241-39-0 HCAPLUS

CN Dammar-20(22),24-diene-3,12-diol, (3.beta.,12.beta.,20E)- (9CI) (CA INDEX NAME)

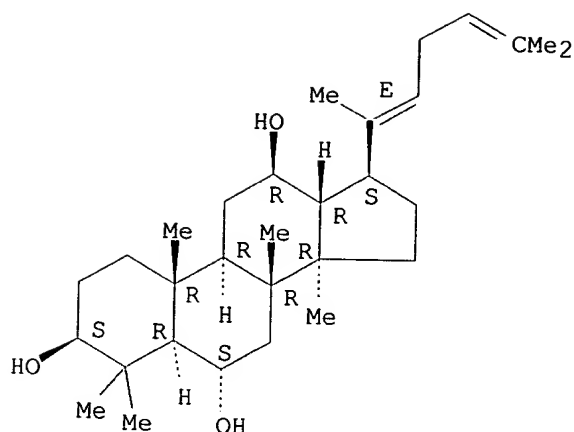
Absolute stereochemistry.
Double bond geometry as shown.



RN 174688-80-3 HCAPLUS

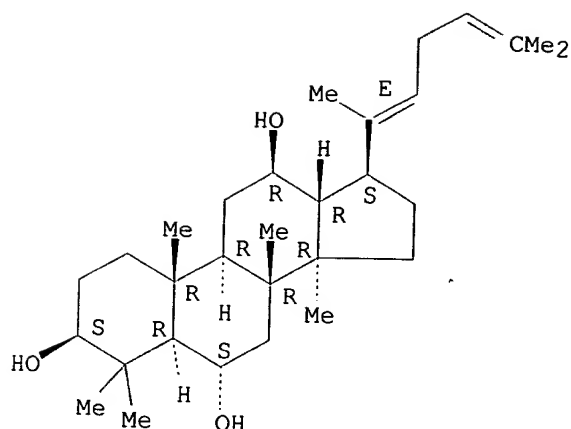
CN Dammar-20(22),24-diene-3,6,12-triol, (3.beta.,6.alpha.,12.beta.,20E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



L20 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1996:171497 HCAPLUS
 DOCUMENT NUMBER: 124:226602
 TITLE: Ginsenoside Rh4, a genuine dammarane glycoside from Korean red ginseng
 AUTHOR(S): Baek, Nam-In; Kim, Dong Seon; Lee, You Hui; Park, Jong Dae; Lee, Chun Bae; Kim, Shin Il
 CORPORATE SOURCE: Korea Ginseng & Tobacco Research Inst., Taejeon, 305-345, S. Korea
 SOURCE: Planta Med. (1996), 62(1), 86-7
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A genuine glycoside, named ginsenoside Rh4, was isolated from Korean red ginseng (*Panax ginseng* C. A. Meyer) through repeated column chromatog., and its chem. structure was established to be 6-O-.beta.-D-glucopyranosyldammar-20(22),24-diene-3.beta.,6.alpha.,12.beta.-triol by spectral and chem. methods. The stereochem. of a double bond at C-20(22) of ginsenoside Rh4 was characterized as (E) from a NOESY expt. in the ¹H-NMR of the aglycon. Cyclotoxic activities of ginsenoside Rh4 and its aglycon against cancer cell lines were evaluated by use of the SRB method.
 IT 174688-80-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. of)
 RN 174688-80-3 HCAPLUS
 CN Dammara-20(22),24-diene-3,6,12-triol, (3.beta.,6.alpha.,12.beta.,20E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.



L20 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:927313 HCAPLUS

DOCUMENT NUMBER: 124:44955

TITLE: Reversal of daunomycin and vinblastine resistance in multidrug-resistant P388 Leukemia in vitro through enhanced cytotoxicity by triterpenoids

AUTHOR(S): Hasegawa, Hideo; Sung, Jong-Hwan; Matsumiya, Satoshi; Uchiyama, Masamori; Inouye, Yoshio; Kasai, Ryoji; Yamasaki, Kazuo

CORPORATE SOURCE: Itto Institute of Life Science Research, Happy World Inc., Tokyo, 183, Japan

SOURCE: Planta Med. (1995), 61(5), 409-1

CODEN: PLMEAA; ISSN: 0032-0943

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Examd. in vitro were the effects of some triterpenoids from Panax (Araliaceae) and Glycyrrhiza (Leguminosae) spp. on the sensitivity to daunomycin (DAU) and vinblastine (VBL) of adriamycin (ADM)-resistant P388 leukemia cells (P388/ADM), which were resistant to multiple anticancer drugs. Quasipanaxatriol, 20(S)-protopanaxatriol, ginsenoside Rh2, and compd. K greatly enhanced the cytotoxicity of the anticancer drugs in P388/ADM cells. The extent of enhancement was different among the triterpene compds.; the 4- to 46-fold increase in DAU cytotoxicity was obsd. in P388/ADM cells in the presence of non-toxic or marginally toxic concns. of individual compds., while those for VBL were in the ratios of 2- to 27-fold. The max. increase in cytotoxicity was obsd. with 50 .mu.m quasipanaxatriol; the resistance indexes defined to be the ratios of the IC50 values for P388/ADM and P388 parental cells decreased from 79 to 1.7 and from 180 to 4.9 in the cases of DAU and VBL, resp. The reversal of DAU resistance in P388/ADM by quasipanaxatriol could be explained by the effective accumulation of the drugs mediated by the DAU-efflux blockage.

IT 171903-78-9, Quasipanaxatriol

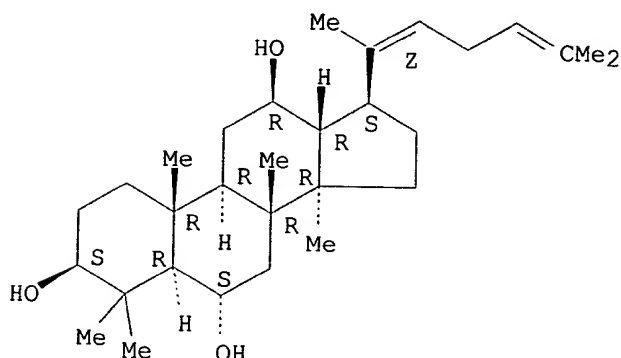
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)

(reversal of daunomycin and vinblastine resistance in multidrug-resistant P388 leukemia in vitro through enhanced cytotoxicity by triterpenoids)

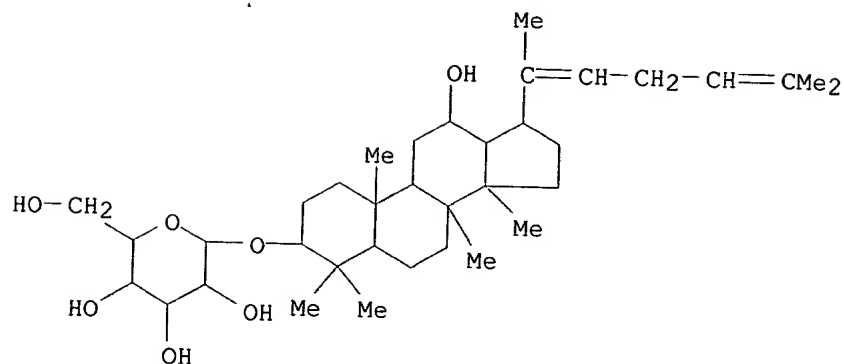
RN 171903-78-9 HCAPLUS

CN Dammara-20(22),24-diene-3,6,12-triol, (3.beta.,6.alpha.,12.beta.,20Z)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



L20 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1995:712730 HCAPLUS
 DOCUMENT NUMBER: 123:122844
 TITLE: Preparation and structure determination of a new glycoside, (20E)-ginsenoside Rh3, and its isomer from diol-type ginseng saponins
 AUTHOR(S): Kim, Dong Seon; Baek, Nam In; Park, Jong Dae; Lee, You Hui; Jeong, So Young; Lee, Chun Bae; Kim, Shin Il
 CORPORATE SOURCE: College Natural Sciences, Chung Nam National University, Taejeon, 305-764, S. Korea
 SOURCE: Yakhak Hoechi (1995), 39(1), 85-93
 CODEN: YAHOA3; ISSN: 0513-4234
 DOCUMENT TYPE: Journal
 LANGUAGE: Korean
 AB Acidic and alk. hydrolysis of diol-type ginseng saponins produced a new glycoside, (20E)-ginsenoside Rh3, and its stereoisomer (20Z), which were further subjected to alk. hydrolysis to give their aglycons, (20E)- and (20Z)-3.beta.,12.beta.-dihydroxydammar-20(22),24-diene. The ratio of stereoisomeric mixts. was estd. to be .apprx.5:1 from intensities of the peaks in 1H- and 13C-NMR spectra. The 1H- and 13C-NMR signals of ginsenoside Rh3, which have remained unclarified, were completely assigned by the extensive application of modern NMR techniques.
 IT 105558-26-7P, Ginsenoside Rh3 166040-90-0P
 166241-39-0P 166241-40-3P
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (prepn. and structure detn. of ginsenoside Rh3 isomers from diol-type ginseng saponins)
 RN 105558-26-7 HCAPLUS
 CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



RN 166040-90-0 HCAPLUS

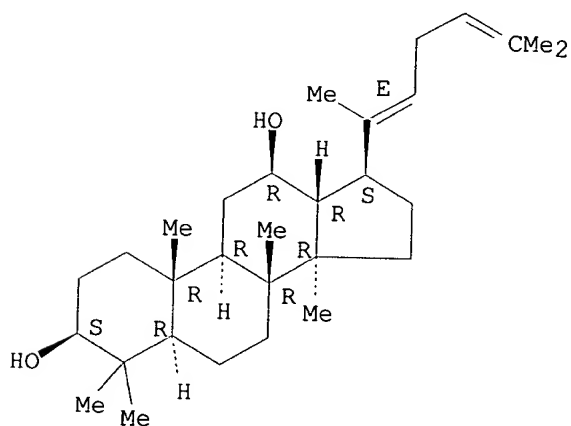
CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20E)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 166241-39-0 HCAPLUS

CN Dammara-20(22),24-diene-3,12-diol, (3.beta.,12.beta.,20E)- (9CI) (CA INDEX NAME)

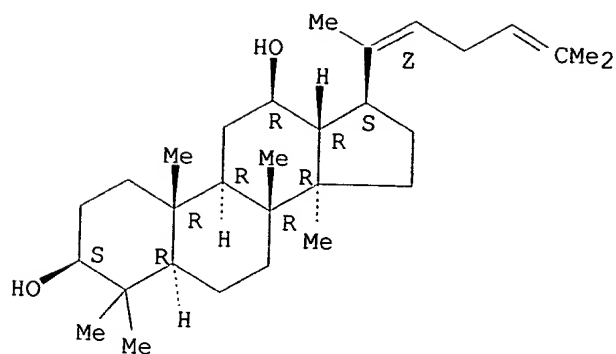
Absolute stereochemistry.
Double bond geometry as shown.



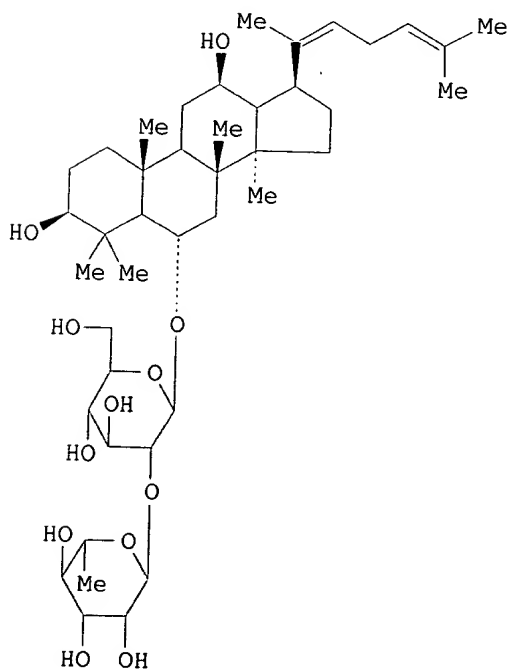
RN 166241-40-3 HCAPLUS

CN Dammara-20(22),24-diene-3,12-diol, (3.beta.,12.beta.,20Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L20 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1990:627962 HCAPLUS
 DOCUMENT NUMBER: 113:227962
 TITLE: A new minor saponin from the leaves of Panax ginseng
 AUTHOR(S): Zhang, Shaolin; Takeda, Tadahiro; Zhu, Tinru; Chen,
 Yingjie; Yao, Xinsheng; Tanaka, Osamu; Ogihara, Yukio
 CORPORATE SOURCE: Dep. Phytochem., Shenyang Coll. Pharm., Peop. Rep.
 SOURCE: China
 Planta Med. (1990), 56(3), 298-300
 CODEN: PLMEAA; ISSN: 0032-0943
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



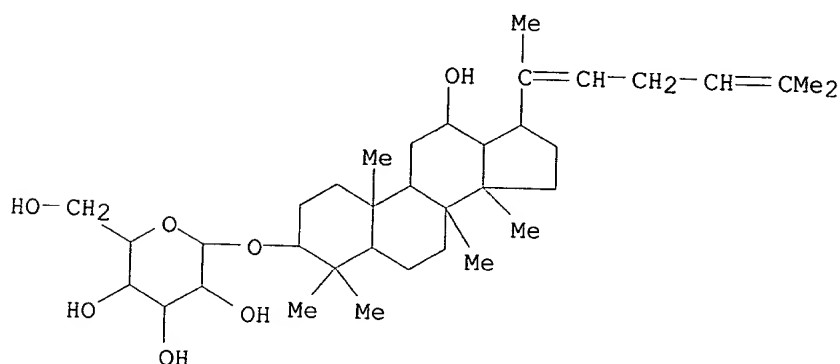
I

AB Seventeen compds. were isolated from the leaves of *P. ginseng*. Among them, a new minor saponin was established as ginsenoside F4 (I). Fourteen compds. were identified as 20(R)-protopanaxadiol, 20(R)-protopanaxatriol, ginsenoside-Rh3, 20(R)-ginsenoside-Rh2, 20(S)-ginsenoside-Rh2, ginsenoside-Rh1, -Rg3, -Rg2, Rg1, -Re, -Rd, -Rc, -Rb2, -Rb1; the others are still under investigation.

IT 105558-26-7, Ginsenoside Rh3
RL: BIOL (Biological study)
(from *Panax ginseng*)

RN 105558-26-7 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



L20 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1988:631403 HCAPLUS

DOCUMENT NUMBER: 109:231403

TITLE: Semisynthetic analogs of ginsenosides, glycosides from ginseng

AUTHOR(S): Atopkina, L. N.; Denisenko, V. A.; Uvarova, N. I.; Elyakov, G. B.

CORPORATE SOURCE: Pac. Inst. Bioorg. Chem., Vladivostok, USSR

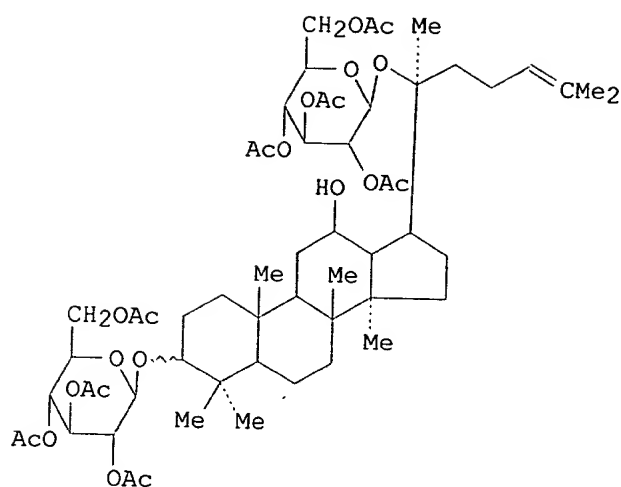
SOURCE: Carbohydr. Res. (1988), 177, 101-9
CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 109:231403

GI



II

AB Glycosylation of dammar-24-ene-3,12.β.,20(S)-triols with 2,3,4,6-tetra-O-acetyl-.α.-D-glucopyranosyl bromide (I) in the presence of silver oxide in dichloromethane gives a mixt. of the acetylated 3-, 12-, 20-, 3,12-di-, and 3,20-di-O-.β.-D-glucopyranosyl derivs., e.g., II, in a total yield of 83-84.5%. Under similar conditions, the 3-O-acetyl derivs. of dammar-24-ene-3,12.β.,20(S)-triols give a mixt. of 12- and 20-O-.β.-D-glucopyranosyl derivs. Condensation of betulafolienetriol both with I in the presence of Hg(CN)₂ in MeNO₂ and with 3,4,6-tri-O-acetyl-.β.-D-glucopyranose 1,2-(tert-Bu orthoacetate) in the presence of 2,4,6-trimethylpyridinium perchlorate in PhCl under azeotropic distn. results in dehydration and 20-dehydroxyglucosides are formed.

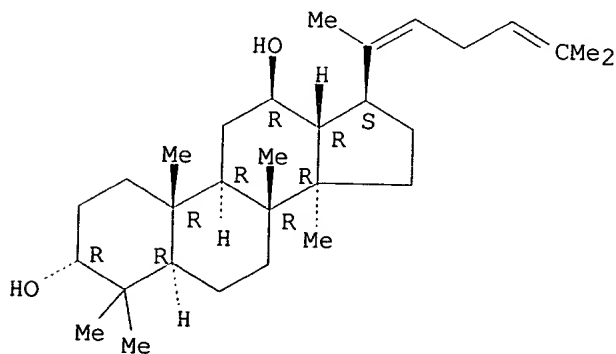
IT 108266-93-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 108266-93-9 HCAPLUS

CN Dammara-20(22),24-diene-3,12-diol, (3.α.,12.β.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



L20 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1988:147119 HCAPLUS

DOCUMENT NUMBER: 108:147119

TITLE: Minor saponins from the leaves of *Panax ginseng*
C.A.MeyerAUTHOR(S): Chen, Yingjie; Xu, Suixu; Ma, Qifeng; Yao, Xinsheng;
Ogihara, Yukio; Takeda, TadaihiroCORPORATE SOURCE: Shenyang Coll. Pharm., Shenyang, Peop. Rep. China
SOURCE: Shenyang Yaoxueyuan Xuebao (1987), 4(4), 282-9
CODEN: SYXUE3

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Five minor compds. isolated from the leaves of *P. ginseng* were characterized as 20(R)-protopanaxatriol, daucosterin, 3.beta.,12.beta.-dihydroxy-dammar-20(22),24-diene-3-O-.beta.-D-glucopyranoside (I), 20(R)-protopanaxadiol-3-O-.beta.-D-glucopyranoside (II), and ginsenoside Rh2, resp., on the basis of spectral analyses and chem. evidence. The two new saponins, I and II, were named as ginsenoside Rh3 and 20(R)-ginsenoside Rh2. Nine other major saponins obtained simultaneously were identical with ginsenoside Rh1, -Rg3, -Rg2, -Rg1, -Re, -Rd, -Rc, -Rb2 and Rb1 resp.

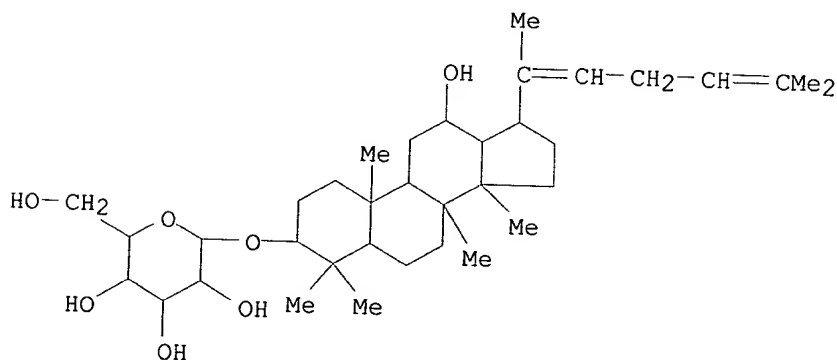
IT 105558-26-7, Ginsenoside Rh3

RL: BIOL (Biological study)

(from ginseng leaves, isolation and identification of)

RN 105558-26-7 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



L20 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1988:43892 HCAPLUS

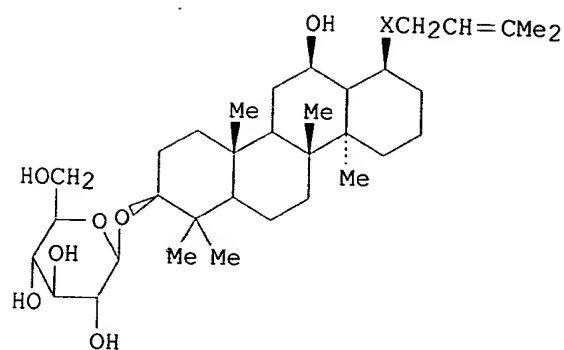
DOCUMENT NUMBER: 108:43892

TITLE: New minor saponins isolated from leaves of *Panax ginseng* C. A. MeyerAUTHOR(S): Chen, Yingjie; Xu, Suixu; Ma, Qifeng; Pei, Yuping;
Xie, Hua; Yao, XinshengCORPORATE SOURCE: Shenyang Coll. Pharm., Shenyang, Peop. Rep. China
SOURCE: Yaoxue Xuebao (1987), 22(9), 685-9
CODEN: YHHPAL; ISSN: 0513-4870

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

GI



I, X=CMe=CH

II, X=20R-CMe(OH)CH₂

AB Four minor compds. was isolated from the leaves of *P. ginseng* and characterized as 20(R)-protopanaxatriol, daucosterin, ginsenoside Rh3 (I), and 20R-ginsenoside Rh2 (II).

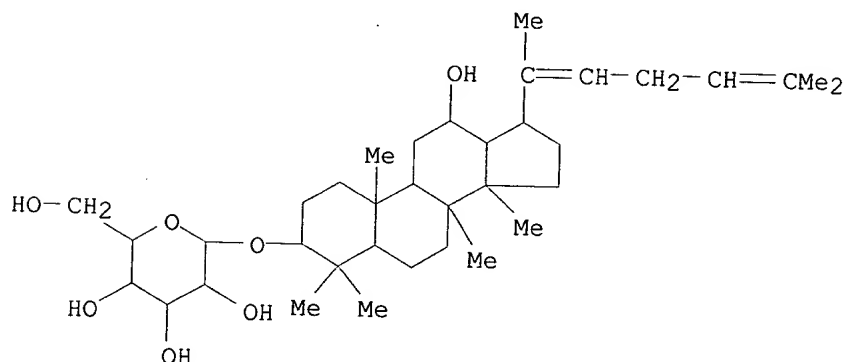
IT 105558-26-7, Ginsenoside Rh3

RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(of *Panax ginseng* leaves)

RN 105558-26-7 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammarane-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



L20 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1987:423596 HCAPLUS

DOCUMENT NUMBER: 107:23596

TITLE: Glycosylation of dammarane type triterpenoids. IV. .beta.-D-Glucopyranosides of betulafolienetriol and its derivatives

AUTHOR(S): Atopkina, L. N.; Denisenko, V. A.; Novikov, V. L.; Uvarova, N. I.

CORPORATE SOURCE: Tikhookean. Inst. Bioorg. Khim., Vladivostok, USSR

SOURCE: Khim. Prir. Soedin. (1986), (3), 301-12

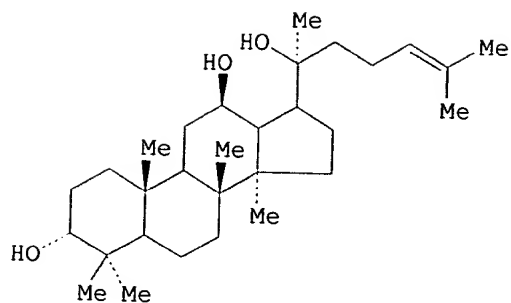
DOCUMENT TYPE: CODEN: KPSUAR; ISSN: 0023-1150

LANGUAGE: Journal

OTHER SOURCE(S): Russian

CASREACT 107:23596

GI



I

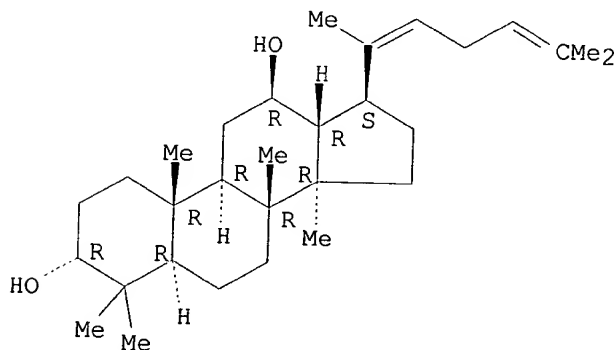
AB Koenigs-Knorr glycosidation of betulafolienetriol (I) gave 3-, 12-, 20-mono- and 3,12-, 3,20-di-O-.beta.-D-glucopyranosides and 3-epimers. Glycosidation by the Helferich reaction or by the orthoester method was accompanied by a dehydration reaction in the side chain which led to the corresponding 20-dehydroxy derivs.

IT 108266-93-9p
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 108266-93-9 HCAPLUS

CN Dammara-20(22),24-diene-3,12-diol, (3.alpha.,12.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



L20 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1987:2889 HCAPLUS

DOCUMENT NUMBER: 106:2889

TITLE: New minor constituents of leaves of Panax ginseng C. A. Meyer

AUTHOR(S): Chen, Yingjie; Xie, Hua; Xu, Suixu; Ma, Qifeng; Pei, Yuping; Yao, Xinsheng

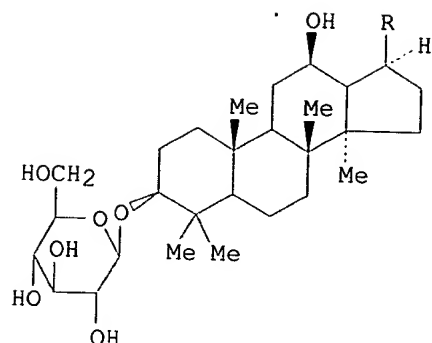
CORPORATE SOURCE: Dep. Phytochem., Shenyang Coll. Pharm., Shenyang, Peop. Rep. China

SOURCE: Shenyang Yaoxueyuan Xuebao (1986), 3(3), 191

DOCUMENT TYPE: CODEN: SYXUE3
 Journal

LANGUAGE:
GI

Chinese

I, $R = C(Me)OH(CH_2)_2CH=CMe_2$ II, $R = C(Me)=CHCH_2CH=CMe_2$

AB Ginsenoside Rh2 (I) and ginsenoside Rh3 (II), 2 novel ginsenosides, were identified from *P. ginseng* with IR, NMR, and mass spectrometry. Ginsenosides Rh1, Rg3, Rg2, Rg1, Re, Rd, Rc, Rb2, and Rb1 were also detected.

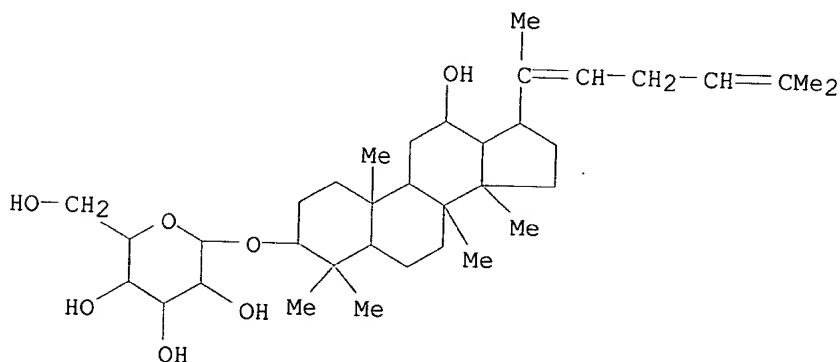
IT 105558-26-7

RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(of *Panax ginseng*)

RN 105558-26-7 HCAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.,20Z)-12-hydroxydammar-20(22),24-dien-3-yl (9CI) (CA INDEX NAME)



L20 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1984:192109 HCAPLUS

DOCUMENT NUMBER: 100:192109

TITLE: Effects of side chains at C17 on carbon-13 chemical shifts of dammarane-type tetracyclic triterpenoids
AUTHOR(S): Denisenko, V. A.; Novikov, V. L.; Malinovskaya, G. V.; Elyakov, G. B.

CORPORATE SOURCE: Tikhookean. Inst. Bioorg. Khim., Vladivostok, USSR
SOURCE: Izv. Akad. Nauk SSSR, Ser. Khim. (1983), (12), 2727-34
CODEN: IASKA6; ISSN: 0002-3353

DOCUMENT TYPE: Journal
 LANGUAGE: Russian

AB Carbon-13 NMR of 24 dammarane derivs. confirmed that the effect of the side chain at C-17 on chem. shifts is related to the intramol. H bond between a C-12 OH group and an OH or epoxy group at C-20. .alpha.17-, .beta.13-, And .beta.16-effects are also obsd.

IT 89951-13-3

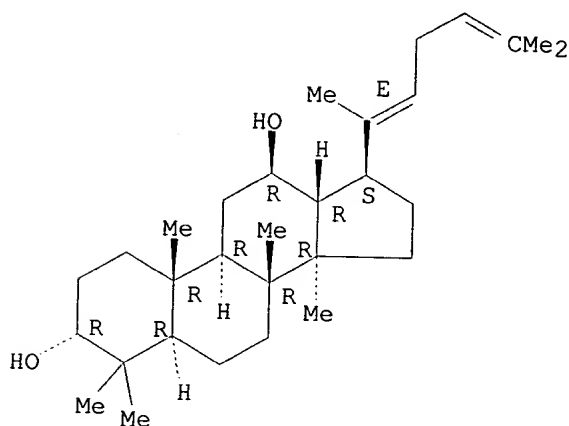
RL: PRP (Properties)

(carbon-13 NMR of, effect of side chain on)

RN 89951-13-3 HCAPLUS

CN Dammara-20(22),24-diene-3,12-diol, (3.alpha.,12.beta.,20E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



L20 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1980:586729 HCAPLUS

DOCUMENT NUMBER: 93:186729

TITLE: Isolation and characterization of ginsenoside-Rg2, 20R-prosapogenin, 20S-prosapogenin and .DELTA.20-prosapogenin. Chemical studies on saponins of Panax ginseng C. A. Meyer, Third report

AUTHOR(S): Kaku, T.; Kawashima, Y.

CORPORATE SOURCE: Cent. Res. Lab., Yamanouchi Pharm. Co., Ltd., Tokyo, Japan

SOURCE: Arzneim.-Forsch. (1980), 30(6), 936-43

CODEN: ARZNAD; ISSN: 0004-4172

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ginsenoside Rg2, isolated from the lateral roots of Panax ginseng, and chikusetsusaponin I, isolated from rhizome of Panax japonicus, were identical in all respects and both had (-) optical rotation which is opposite to the published data. Hydrolysis of a mixt. of ginsenoside Rb1, Rb2, and Rc with 50% aq. AcOH gave 3 compds., which were identified as 20R-prosapogenin (I), 20S-prosapogenin, and .DELTA.20-prosapogenin. I was identical with ginsenoside Rg3.

IT 74964-14-0P

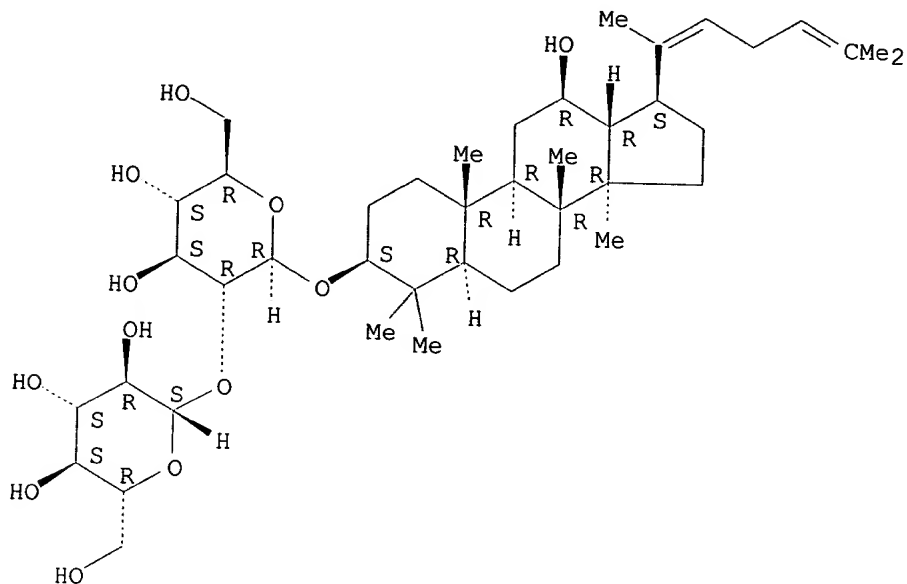
RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 74964-14-0 HCAPLUS

QAZI 09/910,887

CN .beta.-D-Glucopyranoside, (3.beta.,12.beta.)-12-hydroxydammar-20(22),24-dien-3-yl 2-O-.beta.-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



=> d bib abs 1

L22 ANSWER 1 OF 2 MEDLINE
 AN 1998274709 MEDLINE
 DN 98274709 PubMed ID: 9611775
 TI Ginsenoside Rh2 and Rh3 induce differentiation of HL-60 cells into granulocytes: modulation of protein kinase C isoforms during differentiation by ginsenoside Rh2.
 AU Kim Y S; Kim D S; Kim S I
 CS Korea Ginseng and Tobacco Research Institute, Yousong-Gu, Taejon, South Korea.
 SO INTERNATIONAL JOURNAL OF BIOCHEMISTRY AND CELL BIOLOGY, (1998 Mar) 30 (3) 327-38.
 Journal code: 9508482. ISSN: 1357-2725.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199807
 ED Entered STN: 19980723
 Last Updated on STN: 19980723
 Entered Medline: 19980710
 AB Ginsenoside Rh1 or Rh2 differentiated B16 melanoma or F9 teratocarcinoma to phenotypic normal melanocyte-like cells or parietal endoderm-like cells. Ginsenoside Rh3 and Rh4 were recently isolated from *Panax ginseng*, but their biochemical and pharmacological effects remain unidentified. The present study investigated whether the ginsenoside Rh group (G-Rh1, -Rh2, -Rh3 and -Rh4) having similar structures induce differentiation of HL-60 cells and whether protein kinase C (PKC) is involved in differentiation by ginsenoside. Differentiation was assessed by Wright-Giemsa stain and nitroblue tetrazolium reduction. G-Rh2 and G-Rh3 induced differentiation of HL-60 cells into morphologically and functionally granulocytes but G-Rh1 and G-Rh4 did not. G-Rh2 and G-Rh3 arrested the cell cycle at the G1/S phase, consistent with the ability to induce differentiation in a decreasing order of retinoic acid > G-Rh2 > G-Rh3. During differentiation by G-Rh2, Ca²⁺/phospholipid-dependent PKC activity was increased in both the cytosol and total cell extract and Ca²⁺/phospholipid-dependent phosphorylation of 38 and 200 kDa endogenous proteins increased, while phosphorylation of 60, 64, 66 and 97 kDa proteins was Ca²⁺/phospholipid-independent. When cytosolic PKC isoforms were analyzed by immunoblotting, no significant change was observed in the alpha level, however, the immunoreactive 60 kDa band of a similar mass to the PKC catalytic fragment appeared following treatment with G-Rh2. The beta isoform was gradually increased with prolonged treatment. The gamma isoform was not detected in the cytosol of untreated cells, whereas a small amount was detected 5 days after treatment. It is concluded that G-Rh2 and G-Rh3 can induce differentiation of HL-60 cells into granulocytes and modulation of PKC isoform levels may contribute to differentiation of HL-60 cells by G-Rh2.

=> d kwic

L22 ANSWER 1 OF 2 MEDLINE
 RN 105558-26-7 (ginsenoside Rh3); 302-79-4 (Tretinoin); 78214-33-2 (ginsenoside Rh2)

=> d bib abs kwic 2

L22 ANSWER 2 OF 2 MEDLINE
AN 88180344 MEDLINE
DN 88180344 PubMed ID: 3445760
TI Studies on new minor saponins isolated from leaves of Panax ginseng C. A.
Meyer.
AU Cheng Y J; Su S X; Ma Q F; Pei Y P; Xie H; Yao X S
SO YAO HSUEH HSUEH PAO [ACTA PHARMACEUTICA SINICA], (1987 Sep) 22 (9) 685-9.
Journal code: 21710340R. ISSN: 0513-4870.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA Chinese
FS Priority Journals
EM 198804
ED Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19880428
RN 105558-26-7 (ginsenoside Rh3); 78214-33-2 (ginsenoside Rh2)

=> d all

L23 ANSWER 1 OF 1 NAPRALERT COPYRIGHT (C) 2002 BD. TRUSTEES, U. IL.
AN 92:90989 NAPRALERT
DN T13589
TI STUDIES ON NEW MINOR SAPONINS ISOLATED FROM LEAVES OF PANAX GINSENG
C.A.MEYER
AU CHEN Y J; SU S X; MA Q J; PEI Y P; XIE H; YAO X S
CS SHENYANG COLL PHARM, SHENYANG CHINA
SO YAO HSUEH HSUEH PAO (1987) 22 (9) p. 685-689.
DT (Research paper)
LA CHINESE
CHC 1976
ORGN Class: DICOT Family: ARALIACEAE Genus: PANAX Species: GINSENG
[C.A.MEYER]
Organism part: DRIED LEAF
Geographic area (GT): CHINA; EAS
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE RH-3
CAS Registry Number (RN): 105558-26-7
Class identifier (CI): TRITERPENE
Yield: 00.00050%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE RH-2,20(R)
Class identifier (CI): TRITERPENE
Yield: 00.00100%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): PANAXATRIOL,PROTO: 20(R)
CAS Registry Number (RN): 1453-93-6
Class identifier (CI): TRITERPENE
Yield: 00.00125%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): DAUCOSTERIN
Class identifier (CI): TRITERPENE
Yield: 00.00038%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE RH-1
CAS Registry Number (RN): 63223-86-9
Class identifier (CI): TRITERPENE
Yield: 00.00125%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE F
Class identifier (CI): TRITERPENE
Yield: 00.00125%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE RG-3
CAS Registry Number (RN): 14197-60-5
Class identifier (CI): TRITERPENE
Yield: 00.00250%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE RG-2
CAS Registry Number (RN): 52286-74-5
Class identifier (CI): TRITERPENE
Yield: 00.03175%
COMPOUND. Chemical name (CN): GINSENOSE RG-1
CAS Registry Number (RN): 22427-39-0
Class identifier (CI): TRITERPENE
Yield: 00.03175%
TYPE OF STUDY (STY): ISOLATION.
COMPOUND. Chemical name (CN): GINSENOSE RG-1

QAZI 09/910,887

CAS Registry Number (RN): 22427-39-0
Class identifier (CI): TRITERPENE
Yield: 00.00050%

TYPE OF STUDY (STY): ISOLATION.

COMPOUND. Chemical name (CN): GINSENOSIDE RE
CAS Registry Number (RN): 52286-59-6
Class identifier (CI): TRITERPENE
Yield: 00.00150%

TYPE OF STUDY (STY): ISOLATION.

COMPOUND. Chemical name (CN): GINSENOSIDE RD
CAS Registry Number (RN): 52705-93-8
Class identifier (CI): TRITERPENE
Yield: 00.00300%

TYPE OF STUDY (STY): ISOLATION.

COMPOUND. Chemical name (CN): GINSENOSIDE RC
CAS Registry Number (RN): 11021-14-0
Class identifier (CI): TRITERPENE
Yield: 00.01250%

TYPE OF STUDY (STY): ISOLATION.

COMPOUND. Chemical name (CN): GINSENOSIDE RB-2
CAS Registry Number (RN): 11021-13-9
Class identifier (CI): TRITERPENE
Yield: 00.00175%

TYPE OF STUDY (STY): ISOLATION.

COMPOUND. Chemical name (CN): GINSENOSIDE RB-1
CAS Registry Number (RN): 41753-43-9
Class identifier (CI): TRITERPENE
Yield: 00.00150%